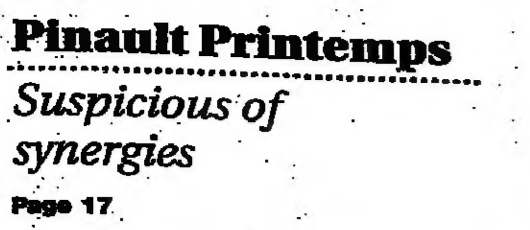
FINANCIAL TIMES



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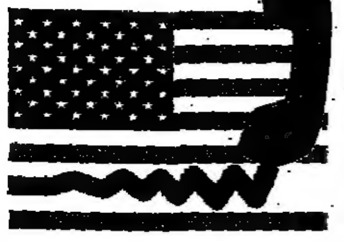

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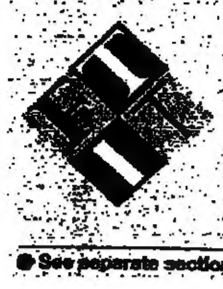
World Business Newspaper http://www.FT.com WEDNESDAY NOVEMBER 6 1996



Technology in the office

The scramble for shares in the $470bn world market for information technology and services is the main focus of today's monthly review of IT. A second section also looks at the growth of India's $1bn software industry.

● See separate section

Bertelsmann may allow outsiders to take stakes

German media group Bertelsmann is considering a corporate restructuring which would allow some of its units to be floated. Chairman Mark Wössner said the group, predominantly owned by a foundation and the family of Reinhard Mohn, was thinking about making its four main business units – book publishing, printing, magazines and newspapers, and television and entertainment – into public companies. Page 15

New PM appointed in Pakistan

Pakistan's new government was sworn in as former prime minister Benazir Bhutto remained under what amounted to house arrest in Islamabad. Interim prime minister Meiraj Khalid (left) said "free, fair and impartial elections" would be held on February 3. President, Farooq Leghari sacked Ms Bhutto's government on charges of corruption, after months of bitterness between the two leaders. Page 14; Bhutto swamped by a wave of allegations, Page 6; Editorial Comment, Page 13

Valeo stake sold for $1.24bn: The controlling 27.4 per cent stake in Valeo held by Cerus, Carlo De Benedetti's French holding company, was sold to three separate buyers for FFr6.33bn ($1.24bn) valuing the French car parts maker at more than FFr23bn. Page 15; Lex, Page 14

Deal reached on Postbank sell-off: Deutsche Post, the German post office, and Postbank, the postal savings bank, reached an agreement that should enable Postbank shares to be sold to private investors. Page 3

German companies pessimistic: German companies remain downbeat about prospects for growth, a survey shows. Page 3

Change urged in EU bond rules: Investment banks are pressing European central banks to relax tight regulations on government bond auctions after the inception of European monetary union, scheduled for 1999. Page 2

Emu could produce surprise tax bills: Some European companies could face unexpected tax bills as a result of European monetary union, accountants are warning, because companies will need to revalue long-term assets and liabilities denominated in foreign currencies. Page 14

Japan seeks $3bn bankruptcy: The Japanese government agency charged with recovering debts owed to failed housing loan companies started bankruptcy proceedings for Y347bn ($3bn) against Osaka property developer Sueno Kosan. Page 14

'Open skies' talks restart: Negotiators from the UK and the US meet in Washington today in an attempt to restart aviation talks aimed at reaching an "open skies" agreement between the two countries. Page 5; Tribunal accepts BA joint bid for Air Liberté, Page 15

Kazakhstan gets credit rating: Kazakhstan, the central Asian republic rich in oil and gas resources, was given BB- speculative grade credit ratings by two of the leading US and European rating agencies. Page 7

UK to raise spending: The UK cabinet agreed to increase public spending in real terms next year. Page 9

Argentina may sell oil company stake: The Argentine government may sell its 20 per cent stake in the country's largest oil company, YPF. Page 4

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■ STOCK MARKET INDICES

New York lunchtime		
Dow Jones Ind Av	6,084.91	(+43.23)
NASDAQ Composite	1,229.3	(+8.82)
Europe and Far East		
CAC40	2,187.32	(+45.17)
DAX	2,681.29	(+19.43)
FTSE 100	3,921.1	(-7.0)
Nikkei	20,592.33	(-40.73)

■ US LUNCHTIME RATES

Federal Funds	$5\frac{1}{8}$%
3-mth Treas Bills: Yld	5.145%
Long Bond	$102\frac{1}{32}$
Yield	6.588%

■ OTHER RATES

UK: 3-mo Interbank	$6\frac{1}{4}$%	(same)
UK: 10 yr Gilt	$98\frac{1}{8}$	($98\frac{1}{32}$)
France: 10 yr OAT	104.44	(103.75)
Germany: 10 yr Bund	102.23	(101.54)
Japan: 10 yr JGB	104.1522	(104.7622)

■ NORTH SEA OIL (Argus)

Brent Dated	$21.85	(22.09)

■ GOLD

New York: Comex		
(Dec)	$379.6	(same)
London:		
close	$379.35	(378.95)

■ DOLLAR

New York lunchtime		
£	1.64585	
DM	1.52055	
FFr	5.1375	
SFr	1.28	
Y	114.25	
London:		
£	1.6458	(1.6469)
DM	1.5168	(1.5132)
FFr	5.1256	(5.1184)
SFr	1.2757	(1.2693)
Y	114.05	(113.79)
Tokyo close:	Y 113.65	

■ STERLING

DM	2.4952	(2.492)

Albania	LEK 275	Gibraltar	£0.75	Lithuania	Lis 18.00	Qatar	QR13.00		
Austria	Sch37	Greece	Dr400	Lux	LFr75	S.Arabia	SR13		
Bahrain	Din1.300	Hong Kong	HK$20	Malta	Lm0.70	Singapore	S$4.30		
Belgium	BFr75	Hungary	Ft270	Morocco	MDh18	Slovak Rp	Sk75		
Cyprus	C£1.30	Iceland	IKr280	Neth	Fl 4.75	S. Africa	R12.00		
Czech Rp	Kc70	India	Rs75	Nigeria	Naira125	Spain	Pta250		
Denmark	DKr20	Israel	Shk9.00	Norway	NKr22.00	Sweden	SKr20		
Egypt	E£5.00	Italy	L3200	Oman	OR1.75	Switz	SFr3.70		
Estonia	EKr 28	Japan	Y500	Pakistan	Rs50	Syria	S£90.00		
Finland	FM18.00	Jordan	JD1.75	Poland	Zl 8.00	Tunisia	Din2.000		
France	FFr12.00	Kuwait	Fils.750	Portugal (m'land)	Es265	Turkey	L120,000		
Germany	DM4.00	Lebanon	LL3500			UAE	Dh13.00		

Doctors say seven hours of surgery more complicated than expected

Yeltsin's heart operation hailed as total success

By Chrystia Freeland in Moscow

Russian president Boris Yeltsin yesterday underwent a multiple heart bypass operation which surgeons declared "a complete success" but said had been more complicated than expected.

Mr Yeltsin recovered consciousness and opened his eyes yesterday evening following the seven-hour operation. Doctors expected to keep him on an artificial ventilator until at least this morning.

Dr Renat Akchurin, the surgeon who led the 12-strong all-Russian team which performed the operation, said they had had to bypass more than the three or four arterial blockages which had been expected.

He would not specify the number of bypasses performed, saying it was "the personal affair" of the president and that he was not authorised to reveal it.

Western medical experts said it was unusual to have to bypass more than four blockages, and the multiple operation indicated severe weakness of the heart. The seriousness of the procedure could complicate the president's convalescence. Doctors also said the length of the operation, double the three- or four-hour standard for a heart bypass, suggested Mr Yeltsin's ailments were extensive.

Before the operation, Mr Yeltsin temporarily handed over all his presidential authority, including control of Russia's nuclear arsenal, to Mr Victor Chernomyrdin, the Russian prime minister. Those powers will be returned to the president when he signs a second decree.

Russia all smiles .... Page 2
Intl Capital Markets .... Page 24

Kremlin officials did not specify when Mr Yeltsin would take back his political mantle, but said he would decide himself when he was again fit enough to rule Russia. Before the operation, aides had said Mr Yeltsin would do so as soon as he had regained consciousness.

Dr Akchurin said the results of the surgery, and an indication of when the Russian leader will return to active politics, would become apparent only over the next few days during the difficult post-operative period.

However, other physicians were less reserved. Dr Yevgeny Chazov, the cardiologist who prolonged former Soviet leader Leonid Brezhnev's tenacious grip on life in the 1970s and 1980s, said "the operation went better than expected".

Dr Michael DeBakey, the US pioneer of heart bypass surgery, who watched the operation on a monitor with three other western doctors, said it had been "a complete success."

The operation deflected much of the country's attention from a nationwide strike, called to protest against wage arrears which have left millions of workers without salaries for several months.

The action drew tens of thousands of participants in hundreds of cities across Russia, but did not have the impact which organisers had promised. In his new role as presidential stand-in, Mr

Continued on Page 14

Prime minister Victor Chernomyrdin remains leader of Russia while Boris Yeltsin recovers from heart surgery Reuters

Bayer in talks over DM20bn chemicals acquisition

By Jenny Luesby in Leverkusen, Germany

Bayer, the German chemicals and pharmaceuticals company, said yesterday it was shopping for a large acquisition that could be worth as much as DM20bn ($13.2bn).

Unveiling results for the first nine months of the year, Mr Manfred Schneider, Bayer's chairman, said the group had held preliminary talks with Ciba of Switzerland and Monsanto of the US.

Both Ciba and Monsanto have said they plan to spin off their chemicals businesses. Bayer is interested in a direct trade purchase.

Mr Schneider said Bayer would be able to take on far more debt than it had at present "if we find the big project we are looking for". Net debt stood at DM1.1bn at the end of last year.

Mr Helmut Loehr, finance director, said net debt of DM10bn would be comfortable, but the group would be willing to increase it to a maximum of DM20bn.

Mr Schneider denied Bayer was in merger talks with BASF, its German rival, although he did say a tie-up between the life sciences operations of the two companies was "a possibility".

Bayer's expansion plans come as many chemicals and pharmaceuticals groups are separating the management – and in some cases the ownership – of the two businesses. Yet Mr Schneider was emphatic that Bayer had no plans to separate its pharmaceuticals and chemicals concerns. It had yet to be shown that such demergers created shareholder value, he said.

Mr Schneider warned that the group would not now meet its goal of a 10 per cent increase in annual pre-tax profits this year. "The sluggishness of the chemical economy in Europe and growing pressure on prices have dampened our optimism," he said.

Also, unexpected exceptional charges, principally in

Continued on Page 14

KLM plans overhaul to save $589m

Services and ground support staff to be cut

By Gordon Cramb in Amstelveen

KLM, the Dutch international airline, is to cut ground support staff, shed unprofitable routes and halt aircraft orders in a three-year programme to save Fl 1bn ($589m).

Mr Pieter Bouw, president, said yesterday: "The drastic nature of the changes requires a less complex KLM organisation." Fleet and crew costs will have to be cut substantially, he said. This is likely to involve external sourcing – in reservations and heavy maintenance – and securing further industry alliances.

"We need a European partner," he reiterated, and hinted that KLM was pursuing a long-sought tie-up. But he declined to confirm that any talks were in progress. Iberia of Spain and Italy's Alitalia have been mentioned as possible partners, although some observers believe KLM should join a stronger existing grouping.

Mr Bouw revealed the overhaul as the company announced a 14.6 per cent dip in second-quarter net profits to Fl 258m, in spite of a 7.2 per cent rise in revenues to Fl 2.82bn. The downturn was blamed on higher fuel and salary bills.

In the half year to September, after-tax earnings rose 21.1 per cent to Fl 529m – but the gain was due to proceeds from the sale in summer of preference shares in Northwest Airlines, the US carrier with which KLM has had a troubled seven-year relationship.

KLM owns 25 per cent of the ordinary equity in Northwest, the fourth-largest US airline, but is prevented from voting with its full holding under Northwest's anti-takeover defences.

A shift of some services to Northwest helped KLM reduce capacity to North America by 6 per cent in the second quarter. With strong cargo demand from Asia-Pacific, KLM increased by 15 per cent the number of tonne-kilometres flown there.

Among the cuts, however, Mr Bouw said it had been "decided to suspend any further expansion of the European fleet within KLM. Several outstanding aircraft orders for the intercontinental fleet will be reconsidered." Existing orders would be honoured.

On the ground, he noted: "New providers of specialised services, such as in the area of reservations, are appearing. These service providers can deliver a very sharp price/quality ratio .... We shall therefore most certainly examine the opportunities for outsourcing and spin-offs of support services."

Shares in KLM added Fl 1.90, or 4.5 per cent, in Amsterdam to close at Fl 43.80. Mr Bouw said to achieve an intended 14 per cent return on equity, the company would seek to increase operating results by Fl 500m within the three-year programme. This would involve "withdrawing from less profitable routes and re-deploying the capacity".

He also some said some on-board service standards would be downgraded. KLM has been engaged in a fares war on its high-volume London route with no-frills carriers such as EasyJet, with which it is in a legal dispute.

World stocks, Page 36

Italian and Spanish bonds surge on Emu expectations

By Richard Lapper in London and David Buchan in Paris

Italian and Spanish government bond prices yesterday surged on renewed expectations that the two countries could become founder members of European monetary union.

Spanish 10-year bonds now yield about an eighth of a percentage point less than UK government bonds or gilts, while Italian bonds are only about a sixth of a percentage point more. As recently as January, Italian 10-year bonds yielded nearly 3 percentage points more than gilts.

"It has been a massive convergence day," said Mr Alex Cooper, manager of Tullett and Tokyo, a futures broker at the London International Financial Futures and Options Exchange. Pointing to heavy buying by large US hedge funds as well as by other institutional investors, he said that "convergence trades are right back on".

Comments by Mr Jacques Chirac, French president, that Spain would be ready to join Emu in 1999, were cited by analysts as one factor which encouraged buying. "We have no doubt as regards Spain but Italy has shown the same will," Mr Chirac, said after the Franco-Spanish summit in Marseilles. "We hope that Italy is ready at the same time as the others."

Yield spreads

In addition, following reports in the European press, a number of investors are expecting a report by the European Commission – scheduled for publication today – to take an optimistic view of Spain's ability to meet Maastricht Emu criteria by next year.

Ms Sharda Persaud, London-based European economist with Italy's San Paolo Bank, said many investors believed the German authorities were now prepared to accept a more flexible interpretation of the Maastricht targets in exchange for a strict post-Emu stability pact. This pact will help set the economic policy framework for Emu members.

A strong performance by the US and German bond markets buoyed the higher-yielding European markets. German manufacturing orders fell 3.6 per cent in September, compared with August. This suggests third-quarter growth will be slower than in the second quarter and inflationary pressures are weak.

Change in rules urged, Page 2; Bonds, Page 24

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Investment banks fear discrimination in government auctions

Change in EU bond rules urged

By Graham Bowley, Economics Staff, in London

Investment banks are pressing European central banks to relax tight regulations on government bond auctions after the inception of European monetary union, scheduled for 1999.

At present, several prospective Emu member countries require investment banks to have a separate local office in the country if they wish to deal in government debt.

Banks fear that retaining, or even tightening, these rules could add severely to their operating costs and that the rules may be used by countries within the proposed single currency area to discriminate against countries which are outside Emu.

"There are concerns about protectionist tendencies," said a senior adviser to a large investment bank in London.

Individual banks and trade bodies, such as the London Investment Banking Association, are pushing for the restrictions to be relaxed.

However, some central banks have resisted these calls, and there are growing fears that countries would retain the regulations in an attempt to boost their standing as a financial centre within monetary union.

At a Brussels meeting last month central bank officials from three European countries rebuffed calls by one large US investment bank for a relaxation of the rules.

French and German banks have lobbied the European Monetary Institute, the forerunner of the European Central Bank, to support the tight regulations.

But there are also concerns that the rules might be relaxed for banks from countries within the single currency area but retained for countries which stayed outside Emu.

This would impose costs for banks from non-Emu countries wishing to operate within monetary union. If, for example, Britain chose not to join the single currency, it could damage London's standing as a financial centre, bankers in London fear.

"We have a concern that there might be a temptation for Emu-in countries to arrange their affairs in a way which would discriminate against Emu-out countries," said Mr Kit Farrow, director general of Liba.

Differences are also emerging between European officials about plans to co-ordinate countries' borrowing policies after Emu.

The sheer size of governments' borrowing means there could be a need for an auction calendar to avoid countries tapping the European government bond market all at once. But this proposal has been hotly resisted by one country which would prefer to retain the ability to tap bond markets when it chooses.

Bond auctions are exempt from single market legislation which would normally force countries to open up fully their internal markets since they are deemed to be linked to monetary policy which is exempt.

Dirty war shadow still over González

By David White in Madrid

Mr Felipe González is not yet out of the woods in Spain's "dirty war" affair, in spite of a Supreme Court decision in his favour.

After a marathon session lasting until after midnight on Monday, the court voted six to four against calling the Socialist former prime minister to answer allegations that he authorised a covert campaign against Basque extremists based in France in the 1980s.

Suspense over the outcome of the public hearing was prolonged by a split among the judges. The final decision, which met widespread relief in political circles, upheld the stance taken in April by the supreme court's examining judge assigned to the case, who found there was no evidence to back the accusations against Mr González. State prosecutors also argued against calling him.

However, Socialist party officials said they feared the affair would continue to bedevil the former premier, with a series of related cases already under way.

The Supreme Court decision also exempted from testifying two other Socialist politicians, Mr Narcis Serra, former deputy premier, and Mr José María Benegas, a prominent Basque figure in the party.

The accusations against Mr González were made during an investigation into a bungled 1983 kidnapping, the first action claimed by the murky Anti-Terrorist Liberation Groups (Gal), which is also held responsible for about 25 murders. His former interior minister, Mr José Barrionuevo, faces charges along with 14 others on grounds of association with an armed band, illegal detention and misuse of public funds

Mr Ricardo García Damborenea, a disaffected former local party leader in the Bilbao region, claimed to have discussed covert anti-terrorist activities on several occasions with Mr González, and Mr Julián Sancristóbal, former director of state security, said he was convinced the prime minister must have been in the know. Both men have been charged in the case.

A more recent accusation came from Mr Luis Roldán, former head of the paramilitary Civil Guard police force, currently in jail facing fraud charges. He claimed to have been told by Mr Barrionuevo that the prime minister was fully behind the anti-terrorist campaign.

"The Gal case does not end here," the Communist-led United Left party said after the court announcement. The daily El Mundo, which has played a leading role in the allegations against Mr González, said the decision flouted the principle of equality before the law.

González: not called

PRESIDENT OF THE RUSSIAN FEDERATION

Dear Russians!

You know that I will undergo a serious operation. Today I want to say thank you to those who have been sending letters and telegrams wishing their president the speediest recovery.

Sympathy and a good word are sometimes more important to a person than any medicine.

My family is helping me in this difficult moment, taking care of me. My thanks to my wife, daughters and grandchildren.

Thanks to you all.

My family and friends are concerned on the eve of the operation, they are nervous. But I am sure everything will go all right.

During the operation I have by decree transferred all presidential powers to the head of the government, Victor Stepanovich Chernomyrdin. Not for a minute will the country be without a leader with full powers. He and my other colleagues are tested and reliable people. They will have great responsibility in the time to come.

I do not intend to stay long in the hospital. I believe I will soon be working at full strength, as I did before.

Be aware that everything I have done, am doing and will do is all for the sake of Russia, for your well-being and for a worthwhile life.

It is especially important for me that you know that today.

I wish you all health and peace and good luck.

B. Yeltsin

5 November 1996

Yeltsin's letter to the Russian people published yesterday

Official Russia all smiles after Yeltsin ordeal

The lenses of television cameras and the thoughts of foreign governments were focused yesterday on the Moscow Cardiological Centre, the sprawling concrete crescent where Russia's most famous heart underwent a gruelling seven-hour bypass operation.

But for many of the ordinary Russians who earn meagre salaries at the hospital President Boris Yeltsin's long-awaited surgery was a matter of little concern.

"It makes no difference to me what the outcome is," said Oleg, a 38-year-old electrician in a scruffy leather jacket as he walked down the cigarette-strewn footpath leading to the hospital. "No matter what happens, the situation won't change, he doesn't run the country anyway."

Other passers-by, including a young doctor who works at the hospital, a middle-aged woman struggling to qualify for treatment there, and several nurses and lab technicians, said life was proceeding as usual inside the Cardiological Centre, although a few complained about heightened security.

But in this desert of popular indifference, Russia's first family and its chosen surgeons formed an oasis of anxiety.

Their ordeal began at 4am, when Mr Yeltsin, always an early riser, carefully combed his hair and put on his favourite sweater.

Then his motorcade raced from the darkness of the countryside into the city and up the wooded slope to the Cardiological Centre, surprising militiamen who said they had not been told in advance.

At 7am, after signing a few decrees, including an emotional appeal to the Russian people and an order temporarily handing presidential powers to Mr Victor Chernomyrdin, the prime minister, Mr Yeltsin submitted himself to the clamps and scalpels of a 12-person all-Russian surgical team.

Four western doctors, including Dr Michael DeBakey, the US pioneer of heart bypass surgery, watched on video monitors, but were not asked to intervene or offer advice.

After more than eight hours, the team's leader, Dr Renat Akchurin, emerged in his surgical whites, looking tired but relieved to tell reporters about the stress of cutting into the Kremlin's most powerful arteries.

"I tried to forget that it was the president of Russia and remember it was just a sick man," he said.

Mrs Naina Yeltsin, the president's wife, who herself underwent a kidney operation over the summer, seemed even more tense.

In a brief television interview in the dark corridors of the Cardiological Centre, Mrs Yeltsin said she and "the girls" – the president's two adult daughters – had not yet been permitted to see Mr Yeltsin.

Chrystia Freeland sets the scene on the day of the big operation

Beneath the nerves and exhaustion, official Russia seemed elated by the outcome of the president's operation. A nurse in the Cardiological Centre said the surgeons indulged in a champagne toast before facing reporters.

Kremlin officials seemed equally pleased. Mr Sergei Yastrzhembsky, the president's press secretary, grinned broadly during an evening television interview. He took particular delight in teasing Russian news agencies for failing to believe Kremlin press aides when they telephoned at 7.20am yesterday with news that the president's operation had begun.

He said it had taken his own voice to convince journalists. It will take the return of a vigorous President Yeltsin to active politics to convince Russia's equally sceptical citizens that he really does rule the country.

Welfare reform 'offers jobs hope'

By Andrew Bolger, *Employment Correspondent* in Brussels

European countries should tackle unemployment by altering their welfare systems to encourage development of a low-wage labour market, according to Professor Fritz Sharpf, director of the Max-Planck institute in Germany.

He told the fourth annual Employment Week conference in Brussels that high levels of employment in Europe were unlikely to be achieved without an expansion of the private service sector.

"Much of that employment will have to be in areas that are not exposed to foreign competition, but the relatively low productivity of service work will allow only relatively low wages to be paid by profit-oriented private employers," said Prof Sharpf.

Given the need to rely on low-wage jobs, social justice could only be maintained if income from work could be combined with social income, he added.

Prof Sharpf said this basic concept was already a part of social policy in several European countries, albeit on a very restricted scale. In Ireland, Italy and in the UK there were programmes supplementing income from work for families with small children, and the same purpose was achieved by the earned income tax credit in the US.

"From a social policy point of view the 'family income supplement' or family credit programmes are greatly superior to welfare systems that create unemployment and poverty traps because social benefits are completely displaced by any income from work.

"From an employment perspective however, the fact these programmes are targeted to assist poor families with small children reduces their potential in countries where low-wage jobs do not at present exist in large numbers.

"In order to invest in the creation of new jobs in markets for commercial services that still need to be developed, private employers need to be assured that workers will generally be available at wage costs below present levels.

"Thus any income subsidy would need to be defined with regard to the wages associated with the job rather than to the poverty and the family status of potential employees."

Senate inquiry calls for wide reform of French banking

By Andrew Jack in Paris

A senior French parliamentary committee yesterday called for wide reform of banking in France in an attempt to reduce competitive distortion and increase the sector's low profitability.

In an influential report, following an inquiry lasting more than six months, the Senate finance commission has proposed modifying in the statutes of the Caisse d'Epargne savings bank, changing labour and tax regulations, and introducing payment for basic banking services.

Its conclusions provide an important new push in growing pressure for reform. Mr Alain Lambert, the commission's secretary, said they were likely to form the basis of a new banking law being drafted by the government. "The banking sector is facing a crisis without precedent," he said.

"There is an extraordinary misunderstanding by the public of the reality facing our banks."

The report says that ownership of the Caisse d'Epargne, frequently criticised by its rivals for offering loans at unprofitably low rates, is unclear. It should modify its statutes to clarify how it is controlled, and pay to the state the FFr62bn ($12bn) in accumulated profits that it holds.

The Post Office, too, should make clear the cost of providing financial services which compete with the commercial banks, says the report.

The senators say that over the next few years tax-exempt savings products, such as the Livret A currently available through the Caisse d'Epargne and the Post Office, should be sold by all the country's banks.

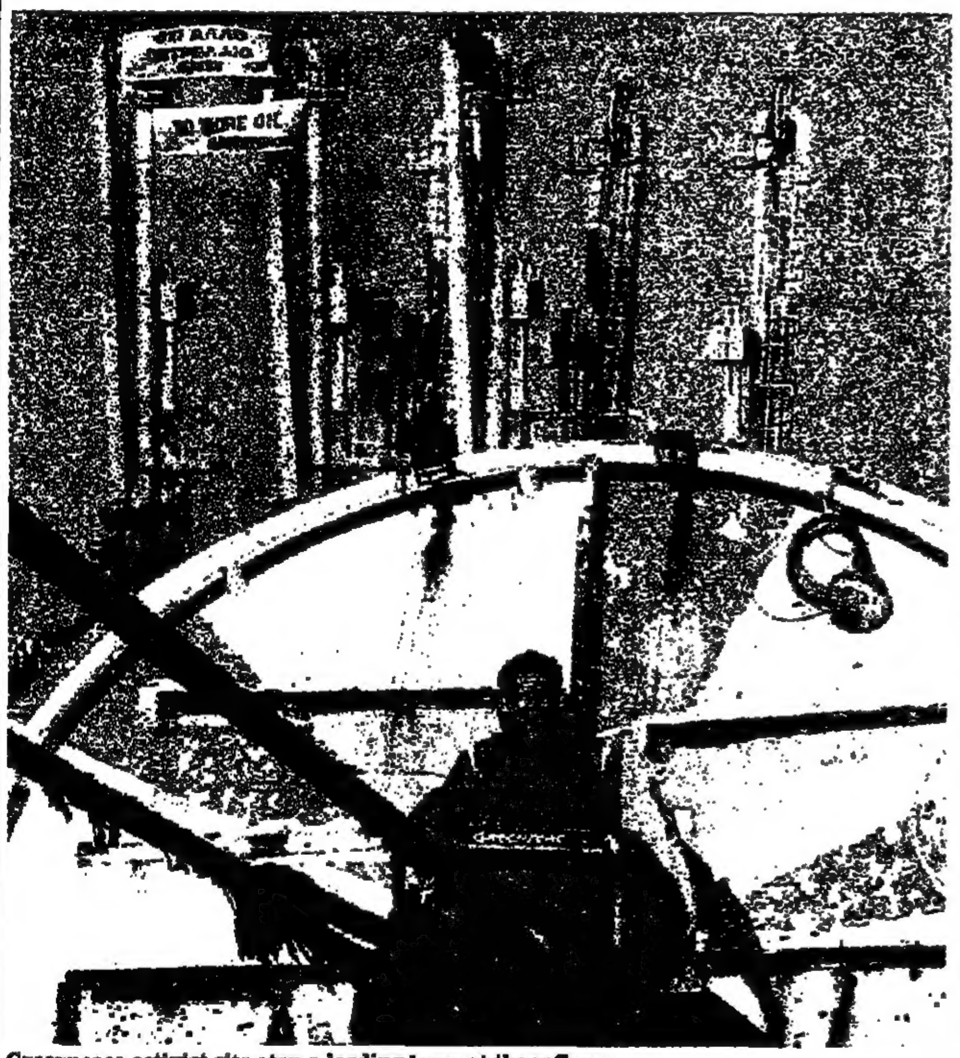
They also call for changes in the law which in practice prevents banks from going bankrupt, arguing that, as long as there is an adequate deposit protection scheme, banks should be allowed to fail like other companies.

The report urges the government to sell off most of the banks still in public ownership, retaining only those institutions with a genuine public service mission which cannot be provided by the private sector – such as long-term finance to small companies. In the view of the committee, banks should be allowed to charge customers for the use of cheques and be allowed to pay interest on accounts, neither of which is permissible at present.

The 1937 regulation limiting working hours in banks needs to be changed and a special tax on bank payrolls abolished.

In an interview, Mr Lambert also highlighted weaknesses in the country's system of banking supervision, arguing that the "controllers and the controlled" were often drawn from the same elite of top civil servants.

There was a need, he said, to diversify the methods of recruitment, but the report stops short of making recommendations on how to do so.



Greenpeace activist sits atop a loading buoy at the refinery AP

Environmental protests at Greek oil refinery

Greenpeace activists yesterday blocked the port facilities of the Motor Oil refinery, Greece's largest, jointly owned by Saudi Aramco and the Vardinoyannis family, Reuter reports from Athens. The environmental pressure group claims the facilities are unsafe. Its speedboats manoeuvred to stop tankers from arriving or leaving and the Greenpeace ship Arctic Sunrise docked at one of the loading berths.

"We will stop all docking to load or unload until the government promises to apply safety laws and to stop loading at night or during heavy seas," a Greenpeace spokesman said.

Aramco bought a 50 per cent stake in the Vardinoyannis family's Motor Oil Corinth Refineries and the accompanying Avinoil Industries distribution network in Greece for $879m earlier this year.

Bulgarian premier urged to resign

Senior figures in Bulgaria's Socialist party yesterday called for the resignation of Mr Zhan Videnov, the prime minister, after the party's battering in the weekend presidential election, AP reports from Sofia.

The challenge came in a letter on the front page of the party newspaper Duma, two days after voters elected opposition candidate Mr Petar Stoyanov as president.

Led by Mr Alexander Lilov, a former party chief who remains influential among Bulgaria's former communists, 19 officials said Mr Videnov had forfeited his right to govern because of the country's economic troubles.

Underscoring the economic crisis, government officials were in Brussels seeking aid from the European Union to ensure they could buy enough grain for the winter while the official BTA news agency said the International Monetary Fund proposed the creation of a currency board to manage Bulgaria's finances. Experts said such a board would aim to restore financial discipline.

Mr Videnov has said he would seek a vote of confidence at a party meeting next Monday. But he said there was no reason to quit unless someone had an alternative policy.

The presidency is largely ceremonial, but Sunday's vote was seen as a referendum on the Socialist government.

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Fragile Romanian coalition bears heavy burden

Voters have invested much hope and expectation in a prospective government lacking experience and a detailed policy, writes **Virginia Marsh** in Bucharest

The votes of Romania's young people, its city dwellers and its business class propelled the centre-right Democratic Convention into first place in Sunday's parliamentary elections. Now they are looking to it to speed the country's transformation into a modern western-style democracy, capable of joining Nato and the European Union.

The Convention, which finished eight percentage points ahead of the former Communists, was due to start talking today with Mr Petre Roman's centrist Social Democratic Union (USD) on forming the country's first anti-Communist coalition since the overthrow of the Ceausescu regime in 1989.

It has promised to accelerate economic reform, free private initiative and develop the civil society that was destroyed by Nicolae Ceauşescu's highly repressive reign.

It is also set to replace a government which took a hesitant and often incoherent approach to market-led change, while fostering a corrupt business elite, neglecting welfare and refusing to decentralise power in what is one of eastern Europe's largest and most ethnically diverse countries.

However, the expected coalition is likely to be fragile and the outgoing Party of Social Democracy (PDSR) – which may yet win the presidency – will be a tough opponent. The Convention, itself a coalition of some 15 centre-right, liberal and "green" groups, is led mainly by relatively inexperienced academics and former dissidents whose platform some consider to be over-optimistic and lacking in detail.

The prospective government also faces a winter of difficult decisions on unpopular but urgent measures to get an insufficiently restructured and overheating economy back on track.

In the run-up to the elections, the PDSR granted large subsidies to agriculture, which accounts for 35 per cent of employment, and pay rises to public sector workers, contributing to an average monthly inflation of 3 per cent, double last year's rate. The outgoing government has also kept the currency, the leu, at an artificially high level, a factor behind a 10 per cent drop in exports in the first half and recent shortages of foreign exchange.

The biggest immediate hurdle, however, is for the two opposition groups to overcome their personal differences and agree on a governing alliance – although a new administration cannot be formed until after a president has been elected on November 17.

President Ion Iliescu, a one-time Ceauşescu aide who is the main power behind the PDSR, will face the Convention's Mr Emil Constantinescu in a run-off which analysts say could go either way.

Although the two opposition alliances campaigned on compatible platforms, many in the Convention distrust Mr Roman, a reformist former prime minister, and his party of technocrats because of their participation in the country's first post-Communist government.

In the violence and chaos that followed Ceauşescu's overthrow, Mr Roman worked alongside Mr Iliescu and the other former senior Communists who took control of Romania and went on to win the first elections by a landslide. However, Mr Roman and the technocratic part of the cabinet differed with the president over the pace of change and the government was toppled by anti-reform riots led by miners loyal to Mr Iliescu in September 1991.

The president, a pragmatic Moscow-educated politician, has since become a greater proponent of change. Although initially shunned by western leaders, he has overseen Romania's rapprochement with the west.

After the opposition won June's local elections, and sensing the population's impatience with rampant corruption and hesitant government, Mr Iliescu instructed the PDSR to favour its more reformist wing when selecting parliamentary candidates.

The president, who commands strong support in rural areas, where nearly half Romania's 23m population lives, hopes his efforts to clean up his party will help him to a third term. He also hopes that if re-elected he can eventually persuade the opposition to include his party in a broad coalition.

Although the Convention had won 30 per cent in the parliament contest with 98 per cent of votes counted by last night, the PDSR will remain the largest single party with about 22 per cent.

EUROPEAN NEWS DIGEST

French delay rail break-up

The French government has postponed parliamentary debate of its plan to split the country's rail system into separate track maintenance and operating companies.

Mr Bernard Pons, transport minister, told the National Assembly that the government still aimed to create next year a new state entity to take over responsibility for FFr125bn ($24bn) of the SNCF rail company's debt and for maintaining and building rail track – leaving the SNCF purely as the national rail operator.

But the scheme would not be presented to parliament next week, as planned, because of "sensitivities" inside SNCF and among MPs. These had been exacerbated by the European Commission's plans to try to introduce cross-border competition in rail. Mr Pons said Brussels' moves had stirred "anxiety and doubt" among rail unions. The unions have demanded the government maintain SNCF's rail operator monopoly and guarantee the jobs of 40,000 track maintenance workers. Anxious to avoid any repeat of last autumn's rail strike, Mr Pons has decided to play for time by commissioning a further study of the new rail track company. *David Buchan, Paris*

German terrorist is jailed

Red Army Faction terrorist Birgit Hogefeld, 40, (pictured above in court yesterday) was jailed for life for murder and for attempting to assassinate Mr Hans Tietmeyer, now president of the Bundesbank. She was found guilty of the murder of a US soldier and two others in an attack on the US Rhein-Main airbase near Frankfurt in 1985, an assassination attempt against Mr Tietmeyer in 1988, and an attack on a newly built prison in 1993. She was acquitted of causing the death of a police officer in a special security forces operation at Bad Kleinen, eastern Germany, in which she was arrested in June 1993. More than 20 members of the extreme leftwing RAF have been jailed for murder and attempted murder since the now-defunct terrorist group began its campaign at the end of the 1960s. *AFP, Frankfurt*

Russians in diamonds probe

A Russian government investigation has revealed serious financial violations at the state diamond company Almazy Rossii-Sakha (ARS). An audit is planned of its ties to the De Beers diamond cartel. The government has given the president of the republic of Yakutia, where ARS is based, a week to remove the officials running the company. Russia's prosecutor general is also investigating the company. Mr Alexander Livshits, Russia's finance minister, said fines for ARS's violations of foreign exchange regulations alone amount to more than $379m.

In August, a government report showed Rbs3,100bn ($570m) of debts despite reported 1995 revenues of $1.38bn. The report said ARS management diverted hundreds of billions of roubles since the company was founded in 1992 to costly and unprofitable projects. Meanwhile, dividends were never paid on the state's controlling stake in the company. ARS is state-owned, but controlled largely by local authorities in Yakutia, which strives for economic independence from Moscow. The company, which controls 98 per cent of Russia's diamond production, is one of the country's largest export earners. *AP, Moscow*

Croatia says UN can stay

Croatia yesterday said it would extend the UN mandate in eastern Slavonia for six months, abandoning its demand for the peacekeeping force to withdraw by spring. Croatia's foreign minister, Mr Mate Granic, said he expected the UN Security Council this week to pass a resolution extending the UN mandate until mid-July. He said an additional monitoring mission would be deployed after July for six months while Croatia took control of the region, the last Serb-held area in the country.

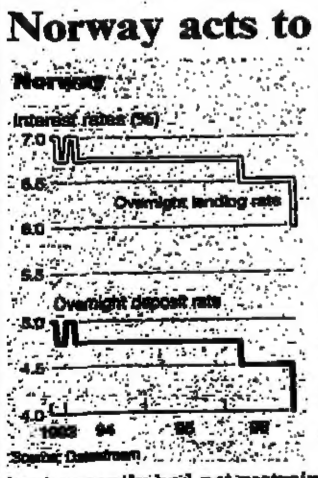
Eastern Slavonia is home to 150,000 Serbs. The Croatian army seized two other Serb-held regions – part of a rebel state – in 1995, causing 180,000 Serbs to flee Croatia. The UN is anxious to prevent another flood of refugees when Croatia takes control of the region. *Laura Silber, Belgrade*

Communists go on trial

Lithuania's former communist leaders went on trial yesterday for their part in the crackdown by Soviet troops in Vilnius in January 1991, when 13 people were killed. Mr Mykolas Burokevicius, the former Communist party chief, and Mr Juozas Jermalavicius, the former party ideologist, are accused of murder and attempting a coup. Mr Burokevicius, 71, who fled to Russia after Lithuania gained its independence, has denied any responsibility for the crackdown, saying local Communist party leaders had no control over Soviet troops. *AP, Vilnius*

ECONOMIC WATCH

Norway acts to restrain krone



Norway's central bank yesterday cut its key overnight lending rate by 0.5 per cent to 6 per cent – the first cut since March – in a bid to hold down the value of the Norwegian krone. High oil prices and the strength of the public finances, which are in heavy surplus thanks to North Sea petroleum revenues, have led to upward pressure on the krone. Mr Kjell Storvik, central bank governor, said significant purchases of foreign currency by the bank recently had not restrained the currency sufficiently. The rate cut had been taken reluctantly as the bank was concerned about the danger of overheating in the economy. It said the cut made more important the need for a tough fiscal policy by the minority Labour government. It stressed the 1997 budget should not be altered to allow greater public spending as many opposition groups demand. *Hugh Carnegy, Stockholm*

■ Belgian unemployment fell to 13.8 per cent in October compared with 14.2 per cent in September. The Belgium-Luxembourg Economic Union posted a trade surplus of BFr18.5bn ($593m) in August, up from BFr4.4bn a year earlier.

■ Denmark had a current account surplus of DKr2.0bn ($345m) in August against a revised surplus of DKr767m in July.

German business sunk in pessimism

By Frederick Stüdemann in Bonn

The German government's hopes of brisk economic recovery were thrown into doubt yesterday when a survey of companies showed business remains down-beat about prospects for growth and employment.

The pessimistic forecast from the German chambers of industry and commerce (DIHT) casts further doubt on the Bonn government's ability to meet the criteria for European monetary union.

The DIHT surveyed 25,000 companies, the most comprehensive poll of its kind, and said it expected growth of only 1 per cent this year and 1.5-2 per cent in 1997.

This forecast is markedly lower than those published last week by Germany's six leading economic institutes. They forecast GDP growth of 1.5 per cent in 1996 and 2.5 per cent in 1997 and said that on current form, Germany would not meet the criteria for Emu.

It must satisfy this next year to be among the founder members of the single currency in 1999.

Mr Franz Schosser, the DIHT's managing director, declined to give an opinion on whether Germany would meet the Maastricht criteria. "I don't think one can say anything until the details of the budget for 1997 are clear," he said.

Unemployment would continue to rise next year though at a more moderate pace, Mr Schosser said. The prospect of jobless growth in Germany "cannot be ruled out".

The DIHT said the main reason for its more pessimistic forecast was the poor level of investment within Germany. Only 19 per cent of companies polled in west Germany and 22 per cent of those in the east said they expected to increase investment next year.

German business remains sceptical about the strength of economic recovery, the DIHT said. With consumer spending still hesitant, domestic demand remained flat, leaving exports as the main carrier of growth.

On a geographical basis, central and eastern Europe offered the biggest potential for export growth.

The survey coincides with gloomy figures released yesterday by the economics ministry showing a decline in manufacturing orders. In September, German manufacturing industry saw a 3.6 per cent drop in orders, following slim increases of 0.1 per cent in August and 0.9 per cent in July.

The ministry said orders from within Germany declined 3.2 per cent while those from abroad fell 4.1 per cent. The overall decline was slightly greater in western Germany (down 3.6 per cent) than in the east (down 3.2 per cent).

The DIHT said the construction industry was facing another meagre year. The industry had lost its position as the motor of recovery in eastern Germany, where growth of 2-3 per cent is forecast this year and 1-3 per cent in 1997 – below that in the west for the first time since 1991.

This is a particularly worrying signal for the Bonn government as economic recovery in east Germany remains top of the policy agenda.

Deal reached on privatisation of Postbank

By Peter Norman in Bonn

Deutsche Post, the German post office, and Postbank, the postal savings bank, have reached an agreement that should enable Postbank shares to be sold to private investors during the next six months, Mr Wolfgang Bötsch, German post and telecommunications minister, announced yesterday.

But before the accord between the two feuding state-owned companies can take effect, Chancellor Helmut Kohl's coalition government has to agree to give Deutsche Post the right to acquire a 25 per cent stake in Postbank to help pay for Postbank's use of post office counters. Yesterday's announcement of the co-operation pact was meant to end six years of quarrelling between Deutsche Post and Postbank. Instead, within minutes, Postbank said it had not been told of the plan to give Deutsche Post the rights to 25 per cent of its shares.

The Free Democrat party, already at odds with other coalition parties over tax policy, announced it would stick by a previous agreement to give Deutsche Post an initial stake of 15 per cent of Postbank in 1999 and which guaranteed Postbank's independence should Deutsche Post take a further 10 per cent.

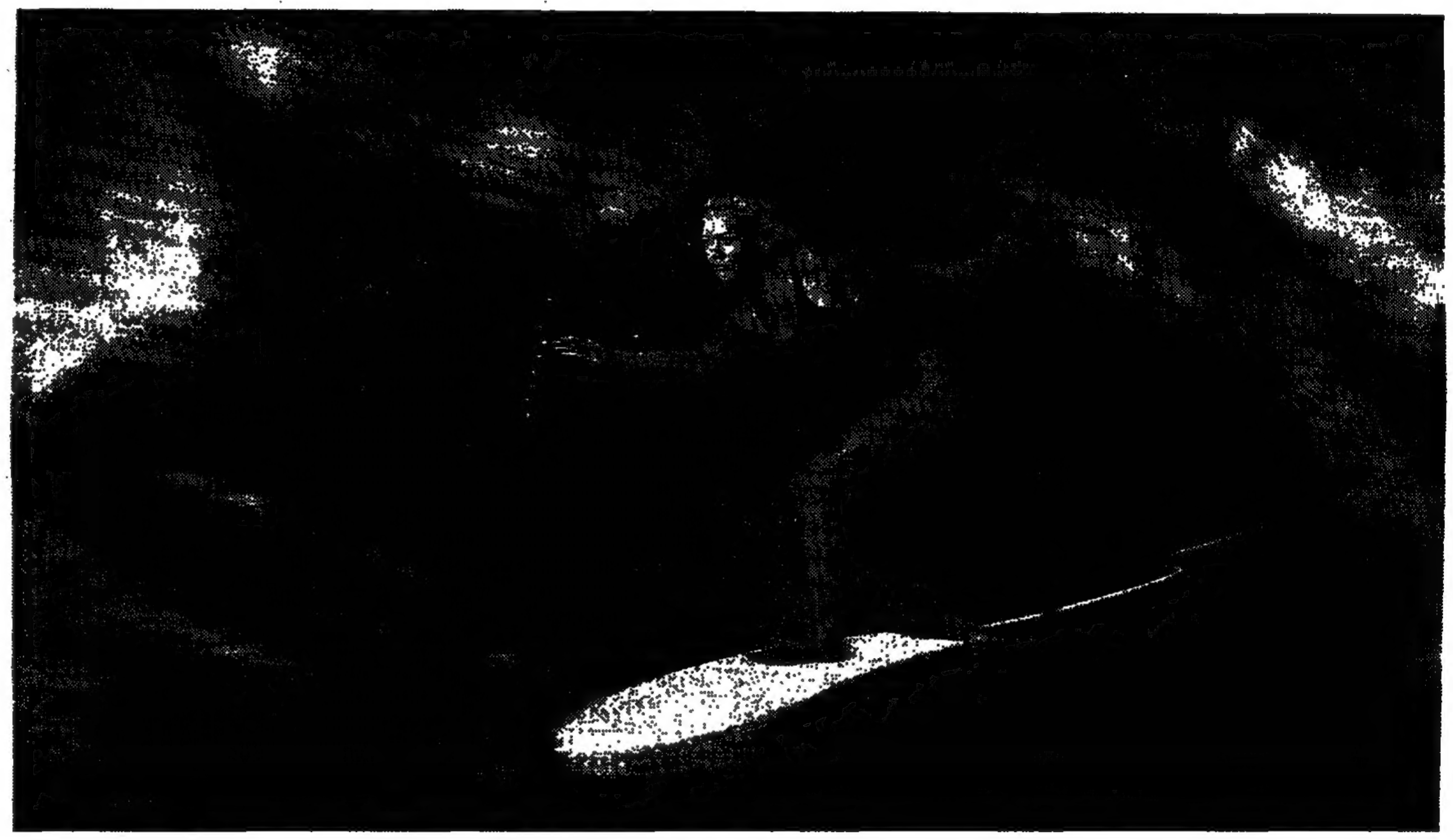
Mr Bötsch now has the difficult task of securing FDP backing for the new plan. He said he would open negotiations with the party this week. According to Mr Bötsch, Deutsche Post said it would sign the agreement only if it was given the rights to the Postbank shares immediately.

Although the actual transfer is still planned for 1999, this procedure would allow Deutsche Post to include the Postbank holding in its balance sheet. Deutsche Post insisted that this was necessary to bridge a gap between the yearly value of DM1.48bn ($973m) it placed on its counter services and the figure of about DM1bn the Postbank was prepared to pay.

Under the compromise agreement, Postbank will pay Deutsche Post DM1.1bn for use of its counters next year. The fee will drop 8 per cent a year in the following three years and by 13 per cent in 2001 to reflect expected productivity improvements at Deutsche Post, cutting Postbank's annual payment to Deutsche Post to about DM750m in 2001.

By that time, both companies should be in private hands and quoted on German stock exchanges. The sale of Deutsche Post is set for 1999 after it has established it can be profitable. The transfer of a majority of Postbank shares to private ownership should happen much sooner.

Postbank has been in contact with the BHW housing finance group, the Volkfürsorge insurance company and BHF Bank of Frankfurt, with a view to harnessing their expertise and services in return for equity stakes.



US ELECTION 1996: the ecstasy and the agony

POLLS APART (from left): Children urge voters to turn out, while Bill Clinton kisses his daughter Chelsea after the final rally. His exhausted Republican challenger, Bob Dole, is cheered on by a supporter in a mask depicting Hillary Clinton

High cholesterol and the hot property from Little Rock

"He *always* eat cheeseburgers. He's just a burger lover."

America's fat-free elites may scoff at Bill Clinton's famously unhealthy eating habits. But at Doe's Eat Place, his favourite greasy spoon back home in Little Rock, Arkansas, his appetite is cause for celebration. "He got a good appetite, a *real* good appetite," says Mrs Lucille Robinson, nodding her head with quiet satisfaction.

She ought to know: since 1976, Mrs Robinson has been cooking cheeseburgers for the man who made Arkansas famous for something other than hillbillies. Yesterday she was back in the sweaty kitchen of Doe's, surrounded by giant sacks of raw french fries and huge tubes of hamburger meat, as a young man clad in bloody white apron used an oversized ice cream scoop to prepare hamburger patties for the state's most famous son.

The food was for what Mrs Robinson insisted would be the Clinton victory party. Flashing a front tooth framed in solid gold, Mrs Robinson scoffed at the notion there might be no victory to celebrate.

Mrs Robinson admitted she was not quite sure whether Mr Clinton would attend; but she had sent the invitation to the White House herself.

Doe's staff were expecting the secret service to arrive at any moment, to stalk between red vinyl chairs upturned on red-checked tablecloths, and bring dogs to sniff the scuffed and scarred black-and-white linoleum of the oldest restaurant in Little Rock.

As the screen door banged incessantly with men passing back and forth with supplies, Mr George Eldridge, Doe's owner, reminisced over the days when Governor Clinton ate at the diner almost daily. Mr Eldridge says he has only seen Mr Clinton six or seven times since he was elected in 1992, but his eating habits have not changed.

"He usually has a few hot tamales and then maybe a steak," Mr Eldridge says. Mrs Robinson points out that this is the Clinton dinner menu – for lunch, it is *always* a cheesburger. "And he likes to browse in the french fry dish," Mr Eldridge confides, adding that the First Lady, Mrs Hillary Clinton, also has a weakness for hot tamales.

The walls are papered with pictures of a younger, slimmer Bill Clinton eating just such foods in the private, panelled back room at Doe's, reserved for his use. Mr Eldridge is not shy to admit that the president's patronage has made that room a hot property in Little Rock: it is often rented out by companies and rich Arkansans for entertaining.

Meanwhile, it was almost time to turn on the neon Budweiser sign in the window and open for lunch. A few hundred yards away, at the train station, Mr Clinton was just about to enter the polling station to vote for himself – and do what he could to ensure the correct result for Mrs Robinson's victory party. She would have hamburgers and hot tamales ready for him either way – and gumbo and chilli and steaks and fries. His appetite was her pride and joy. Not for her, a fat-free president.

Patti Waldmeir

Stephen Fidler talks to economy minister Roque Fernández

Argentina may sell final stake in country's largest oil company

The Argentine government may sell its 20 per cent stake in the country's largest oil company, YPF, next year and offer a deal to workers that will allow the sale of the 10 per cent stake they hold, Mr Roque Fernández, the economy minister, said yesterday.

Mr Fernández said the government was studying the issue of a bond convertible into YPF shares at a premium to the prevailing market price. YPF has a current market value of more than $8bn.

He said YPF workers were saving by instalments to pay for their shares and might be tempted by a government offer which would mean they would not have to complete their payments.

This was one of a number of international capital raising options the government had for next year, he said in an interview in London.

Others included a Mexican-style swap of new debt for Brady bonds issued in 1993 as part of the restructuring of its old bank debt. No decision on whether to go ahead had yet been taken.

Mr Fernández said some $8.7bn of public debt was due to mature next year, similar to this year's level. This included some $5.7bn of bonds that would mature next year, $2.7bn of which were held by residents. Flows to local pension funds would total $2.5bn and to mutual funds and insurance companies $1.5bn.

Mr Fernández said the government would need $14.1bn of financing next year.

Apart from maturing debt, a further $3bn would cover the fiscal deficit and $1.5bn the cost of social security and government reform. Some $8.5bn would be raised from the international market, $3.2bn from domestic sources, $1.1bn from privatisations and other capital revenue and $1.3bn from multilateral organisations.

The 1997 fiscal deficit of 0.9 per cent of GDP compares with 2 per cent of GDP this year, he said. The International Monetary Fund last week granted a waiver to allow the earlier deficit target to be missed. The economy is continuing to emerge from a severe recession with growth officially forecast to rise from 3 per cent this year to 5 per cent next.

Public debt maturities would remain at about $8.5bn in 1998 but rise to $10.5bn in 1999 and $10bn in 2000. By 2000, assuming a growth of nominal gross domestic product of an annual 7 per cent, the ratio of public debt to GDP would have fallen to 25 per cent from 31 per cent last year; and of public debt to exports, to 291 per cent from 435 per cent.

Mr Fernández said Argentina's convertibility law, which fixes the peso to the dollar and only allows the central bank to issue money if backed by hard currency reserves, could last "for the next 10 to 20 years".

"For this president and the next at least I think it will work very nicely," he said.

He said there was strong evidence suggesting that prices in Argentina were flexible, which had allowed a real depreciation of the peso since 1994.

Furthermore, the "tequila" experience of 1995 following Mexico's devaluation showed that the central bank could still act as a lender of last resort in the event of a financial crisis.

Measures to improve the functioning of the labour market and reduce the costs of hiring would further help, he said. Some of these measures had already been taken. The operation of the health insurance system had been modified to allow competition.

Planned legislation to move from a severance payment to an unemployment insurance regime could be passed by the end of the year.

Labour legislation was also before Congress to put collective bargaining on wages and working conditions at a corporate rather than an industry level. This could take longer to pass Congress.

Argentina continues to have one of the world's lowest inflation rates, despite a 0.5 per cent rise in October's retail price index, the highest monthly leap since December 1994. The rise brings 12-month retail inflation to 0.4 per cent, David Pilling reports from Buenos Aires.

Economists had expected October's index to rise by nearly 2 percentage points because of big increases in the cost of fuel and transport that were part of a recent budget-balancing austerity package. Cheaper food and weak demand largely absorbed such pressures.

Analysts said that, if the effects of the austerity package were excluded, prices would have fallen 0.2 per cent in October, continuing a deflationary trend that began when Argentina slipped into a deep recession last year.

Depressed prices and wages have helped boost Argentina's competitiveness in relation to countries with higher inflation, but may also have prolonged a recession from which the economy is only now slowly recovering.

Havana credit request raises doubts

By Pascal Fletcher in Havana

Cuba has asked several leading trade partners to provide export credits totalling $500m to help offset damage inflicted by Hurricane Lili and to ease the burden of rising food and oil import costs.

The requests for bilateral credits on three- to five-year repayment terms followed a call by Havana for humanitarian aid after Hurricane *Lili* battered the country in October. The government said crops, housing and infrastructure were badly damaged.

Cuba sought humanitarian aid through the United Nations. But Mr Roberto Robaina, the foreign minister, requested the credits in individual meetings with the ambassadors of Canada, Britain, France, Italy and Brazil. They were told they would be "one-off" credits largely intended to help Cuba cope with expected food shortages.

The governments approached are reacting cautiously. There is a widespread perception among foreign diplomats that the authorities may have overstated the effects of Lili. Senior diplomats who inspected the worst-hit provinces said they did not see the scale of devastation, especially to housing and infrastructure, reported by the authorities.

Senior Cuban officials had described Hurricane Lili as a national tragedy that would badly set back Cuba's economic recovery hopes. But, apparently moving to dispel fears about future growth prospects, the government quickly announced this would not prevent the economy from surpassing a 5 per cent gross domestic product growth target for 1996.

Many diplomats believe Cuba's move was more directly motivated by a balance of payments squeeze resulting from lower world prices for the island's main exports, sugar and nickel, and a sharply rising import bill, especially for oil.

The EU and others are providing humanitarian aid, but Havana's bid for softer credits is seen as a more sensitive issue because of outstanding Cuban debts to official creditors and US pressure on foreign trade and investment links with the island.

AMERICAN NEWS DIGEST

BP in plea for vindication

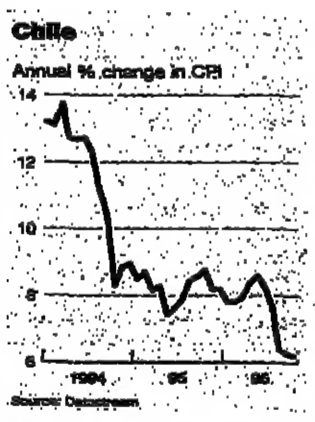
British Petroleum has asked the legal authorities in Colombia to investigate allegations that the company is collaborating with Colombian military intelligence to suppress dissent in oil-producing areas.

Mr John Browne, BP's chief executive, said yesterday the allegations were "groundless and without substance". He disclosed the company had written to Colombia's prosecutor general in Bogotá last week, asking him to "investigate each allegation to prove them true or false".

BP, one of the largest foreign investors in Colombia, is subject like other oil companies to a "war tax" to help defray the cost of military operations. It has also had to provide lodging and other support to security forces protecting its facilities, as well as to workers on the pipeline linking oilfields with export outlets. But executives said there was no question of "collaborating" with the army. In the last three months there have been two attacks on BP operating sites. In one incident two policemen were killed. There have also been complaints from some local groups about the company's environ- mental, labour and welfare policies.

Robert Corzine, London

Chile's inflation rate slows



Chile's inflation rate is continuing to slow, according to official figures released yesterday, which show a 6.2 per cent year-on-year increase in the consumer price index against 8.8 per cent in the same period last year. The Central Bank is now confident it will meet its inflation target of 6.5 per cent for 1996. However, it is awaiting the results of current public sector wage negotiations and the final size of the budget, due to be approved by Congress by the end of the month, in order to decide when to relax its credit squeeze. Unemployment figures in the three months to September, also released yesterday, showed an unexpected fall from 7 to 6.8 per cent.

Imogen Mark, Santiago

Ex-officer on US spy charges

A former Soviet intelligence officer is expected to appear in a Massachusetts court on charges of trying to obtain information on US missile defence.

Mr Vladimir Galkin, a Russian citizen who worked for the former KGB, was arrested last week on arrival at New York's John F. Kennedy airport, a court official said. The charge stems from Mr Galkin's alleged espionage activities from 1990 to 1991.

AFX, Washington

Cuba renews jets campaign

Cuba yesterday renewed its campaign to gain permission for its commercial jets to fly over US territory. At present, Cuban aircraft bringing Canadian tourists every winter are forced by US sanctions to detour over the Atlantic to Cuba, pushing up fuel bills. The Cuban government called for free commercial access to US skies in a resolution presented to the general assembly of the 21-member Latin American and Caribbean Civil Aviation Commission in Panama City.

AFP, Havana

Peru drug baron arrested

The Peruvian government has announced that police have captured the country's most wanted drug baron in neighbouring Ecuador, and have broken up his trafficking ring, which was supplying *Colombia's Cali cartel*. In a joint operation by Peru's intelligence service and Ecuadorean police, Mr Willer Alvarado Linares – known as "Champa" – was arrested in a Quito hotel on Sunday after being tracked from Bogotá. Four other alleged traffickers were also arrested.

Reuter, Lima

Multinationals 'rising to energy challenge'

By Nancy Dunne in Washington

Privatisation and pent-up need for investment have created scores of new multinationals in the global energy market, luring them to invest billions of dollars in new projects, according to a report from the US energy department released yesterday.

With more than $1,000bn needed in new investment over the next 10 years, the companies have risen to the challenge through acquisitions, mergers, consolidations and strategic alliances, the report says.

"Oil and gas companies have become electricity companies; domestic regional electric utilities have become multinational electricity companies; electricity distribution companies have become generation companies; and generation companies have become distribution and transmission companies," the report notes.

The most pronounced impact of privatisation so far may be the increased level of ownership of several former state-run petroleum companies by foreign investors – particularly those from the US.

As the role of the World Bank and other development agencies has diminished "significantly", new private funding sources for international investment are rapidly emerging. These include the expected – oil producers and natural gas pipeline companies – but also the unexpected, such as construction companies and power equipment manufacturing companies.

Privatisation has also resulted in a convergence of petroleum-related activities and electric power-related activities, the report notes. The trend stems partly from the growing use of natural gas in some regions, for its environmental advantages over coal or oil, driven by the improved efficiency of gas-fired electricity generation units.

Growth in demand is greatest in Asia, where developing countries which accounted for only 14 per cent of total world electricity consumption in 1992 are expected to account for a third of total demand growth between now and 2010.

In Latin America, heightened environmental concerns are strengthening demand for natural gas, particularly in Brazil and Chile. Natural gas pipeline projects, costing nearly $7bn, are either under construction or active consideration.

The structure of the world's coal industry, which accounts for a quarter of global energy consumption, has also undergone considerable change. Encouraged by the removal of coal subsidies, European companies – particularly multinational conglomerates – have increased their presence abroad in recent years.

Privatisation and the Globalisation of Energy Markets. Energy Information Administration, Room 1F-048, Forrestal Building, Washington, DC 20585. Tel 202 586 8800.

US blacks hit by hate crimes

By Gerard Baker in Washington

Blacks remain the principal target of the continuing high level of hate crimes committed in the US, according to a report published by the Federal Bureau of Investigation yesterday.

The FBI said race was the motivation in more than 60 per cent of all such crimes reported by the nation's police forces in 1995. Citing preliminary data, the bureau said 7,947 hate crimes were committed last year, of which 4,831 were racially motivated.

Hate crimes are defined by the FBI as those that show evidence of prejudice based on race, religion, ethnicity or sexual orientation.

The total figure represented a 35 per cent increase on crimes reported in 1994. But officials stressed the numbers could not be reliably compared with the previous year since the number of forces reporting had risen substantially.

For 1995, 9,500 police agencies in 45 states and the District of Columbia, covering 75 per cent of the US population, reported statistics, compared with 7,200 from forces covering 50 per cent of the population in 1994.

Of the racially motivated crimes, whites were the victims in 25 per cent of cases. Religious bias was the second most frequent basis of prejudice in hate crimes, with Jews by far the most common target. Of the 1,277 incidents Jews were victims in 1,058 cases.

Sexual orientation was the motivation for 1,010 crimes, or 12.8 per cent of the total. Attacks on male homosexuals accounted for 735 cases, or 72.1 per cent. Ethnicity and national origin was the fourth major category of hate crimes.

The most frequently reported offence was intimidation, responsible for 41 per cent of all cases. Destruction and vandalism of property accounted for 23 per cent of the offences, assault for 18 per cent and aggravated assault for 13 per cent.

UK, US restart open skies talks

By Michael Skapinker, Aerospace Correspondent

Government negotiators from the UK and the US meet in Washington today in an attempt to restart aviation talks which collapsed acrimoniously in August.

The talks, which the UK says are at the Americans' initiative, are aimed at reaching a new "open skies" agreement between the two countries. The US has made the conclusion of such an agreement a precondition for approval of the proposed alliance between British Airways and American Airlines.

The last time UK negotiators were preparing to set out for Washington, they received a message from their US counterparts telling them not to bother coming. The cause of the breakdown was a memorandum from the British government making it clear that the UK was not prepared to sign the sort of accord the US had concluded with Germany and other European countries.

In particular, the UK objected to giving US airlines "beyond rights", allowing them to carry passengers from Britain to third countries. The UK argued that "beyond rights" should be granted only if UK airlines were granted cabotage, the right to carry passengers within the US. Virgin Atlantic, the independent UK carrier, has said that it wants to set up a domestic US service.

The US insisted its airlines had to be given "beyond rights" and rejected the UK's demand for cabotage. The US also rejected a UK proposal that a tribunal be set up to protect smaller carriers against predatory pricing and anti-competitive behaviour by large airlines.

The US said in August the UK's proposals "fell so far short of providing the essential elements of an open skies agreement that talks would not be productive".

Opinion on whether today's talks stand a better chance of success are mixed. A US official said his government's intention was to see whether the UK's position had shifted. "These discussions are intended to see whether there's a mutual understanding on how to move forward."

He said, however, that the US was not prepared to back down from its insistence that the UK had to sign a similar agreement to that concluded with other European countries. The US has said that if the UK receives any special favours, European countries which have already signed deals would demand that their accords be renegotiated.

This suggests that any compromise will have to come from the UK. BA is anxious to conclude its alliance with American. USAir, BA's existing US partner, has said it will end its code-sharing and frequent flyer programme with the UK carrier in March.

The UK Office of Fair Trading has submitted a report on the BA-American alliance to Mr Ian Lang, trade and industry secretary, who is expected to make an announcement this month.

Vietnam makes strides into EU

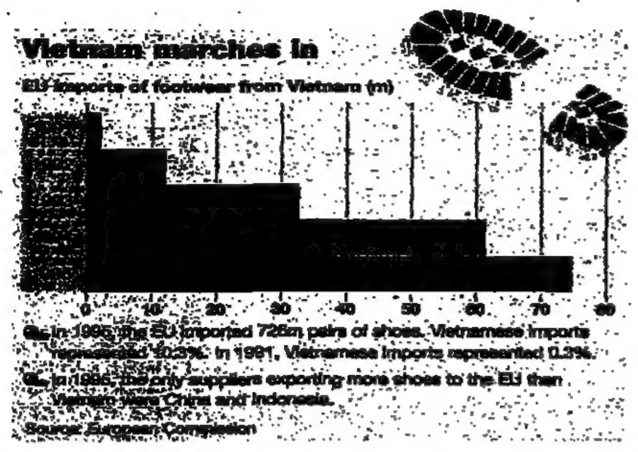
There is barely room to move at Hunsan Co's shoe factory in a suburb of Ho Chi Minh City, let alone be heard above the whirr and clatter of machinery. Every inch of space is occupied by piles of half-finished sports shoes and boxes as the company races to complete a $1.2m order for 80,000 sports shoes from Miber, an Italian customer.

"If someone comes to us with a design, we can turn it around in three days," says Mr Pham Ngoc Lam, the company's US-trained finance and investment manager. Hunsan, like many Vietnamese shoe makers, has seen business boom since it was founded four years ago, much of it thanks to export orders to the European Union.

In 1994 it sold $1m of shoes abroad. That figure has risen to $5m in the first eight months of this year, 80 per cent of which was to EU member states.

Long used to selling through South Korean intermediaries with the right contacts, Hunsan plans to sell directly through European distributors as a way of exporting more.

These plans may be good news for the Vietnamese authorities as they try to encourage the development of the country's weak export capacity; shoes have become the country's sixth largest export earner.



In 1995, the EU imported 726m pairs of shoes. Vietnamese imports represented 10.3%. In 1991, Vietnamese imports represented 0.3%.
In 1995, the only suppliers exporting more shoes to the EU than Vietnam were China and Indonesia.
Source: European Commission

But they strike fear into the boardrooms of European footwear manufacturers. They already face tough competition from competitively priced Chinese and Indonesian products. Vietnamese shoe exports to the EU have emerged as the latest threat, jumping to 61.5m pairs in 1994 from 628,000 pairs in 1989.

And Vietnam's emergence as the third largest footwear exporter to the EU after those two countries is confirmation that the competitive threat from Asia remains undiminished.

In 1990, Vietnam exported 750,000 pairs of shoes – mainly synthetic sports shows, leather shoes and "tissue tops" – worldwide. Last year saw nearly 80m pairs exported, earning the country $250m, according to EU data.

The steep rise is partly due to the arrival of foreign investors, mostly South Korean, Taiwanese and Hong Kong-based companies. Hanoi opened up its manufacturing sector to foreign investment in 1990.

The result has been a boost in production capacity at previously moribund Vietnamese concerns. Assembly work is effectively sub-contracted to the Vietnamese partner.

Foreigners and Vietnamese have also been quick to exploit the low tariff regime that applies to Vietnamese shoe exports to the EU. Under the Generalised System of Preferences, Vietnam enjoys reduced duty on footwear exports.

Pressure is therefore likely to mount on the EU from European manufacturing federations to find ways of stemming the flow of Vietnamese shoe exports.

EU officials say they are acutely aware of the concerns but need to find out more about the structure of Vietnamese shoe production before taking a position.

Chief among their concerns is the origin of the raw materials used by Vietnamese manufacturers. There are suspicions that some Chinese products – subject to high EU tariffs – are slipping across the border into Vietnam and being exported under Vietnamese labels.

However, officials seem to be clear about one thing: Vietnam's capacity to supply local manufacturers with raw and processed leather is poor, creating opportunities for sales, including tanning equipment, to Vietnam.

"If we can expand our raw material exports to Vietnam it's already less painful than importing finished products," says Mr Riccardo Ravenna, head of the European Commission's delegation in Hanoi.

Mr Thai Van Hung, Hunsan's president and founder, dismisses concerns that the EU might eventually impose tariffs and quotas on Vietnamese shoe exports. He estimates his company has a three-year window to install new capacity to take further advantage of the EU market.

However the industry's scope for growth is limited by its reliance on raw material imports. Businessmen say this imposes a strain on the ability of companies to put competitive prices on finished products.

"Some of the factories are having problems. They're taking whatever price they're being offered because they need the business," says Mr Lam.

He adds that seasonal fluctuations in demand make reliance on exports a liability and that Hunsan, though keen to increase exports, aims for an even split between the local and foreign market to reduce risk.

Mr Phan Dinh Do, general director of the Vietnam Leather and Footwear Corporation, admits there are other problems. He says: "1996-2000 could be regarded as a banner period for Vietnam's footwear industry. But we rely too heavily on foreign companies for spare parts, equipment and materials. We need to step up production and distribution of our own products. We are also bad at marketing."

Jeremy Grant

China to hold 46% of jet project

By Tony Walker in Beijing

Aviation Industries of China (Avic) will hold 46 per cent of a project to build a 100-seater regional jet, with its European and Singaporean partners taking the rest.

Mr Zhu Yuli, president of Avic, yesterday said Aero International Asia, which includes British Aerospace and Aérospatiale of France, would hold 39 per cent, and Singapore Technologies 15 per cent.

This is the first time a Chinese official has mentioned specific shareholdings. The partners signed a memorandum of understanding in July, but final agreement is still pending.

The official Xinhua news agency quoted Mr Zhu as saying the AE-100 aircraft would come on the market in 2002. Aérospatiale said the project aimed to produce at least 1,000 aircraft for sale worldwide.

The European consortium beat Boeing for the right to partner Avic in the project. A Korean consortium headed by Samsung dropped out earlier this year.

The involvement of BAe and Aérospatiale, both Airbus Industrie members, means that the other two members of the European consortium, Daimler-Benz Aerospace (Dasa) of Germany and Casa of Spain, would be drawn into the project. BAe and Aérospatiale are already partners with Alenia of Italy in the Aero International Asia consortium.

Beijing wants Airbus involvement so that the 100-seat jet is compatible with other elements of the Airbus fleet. "We want the AE-100 to share certain features with Airbus planes so as to benefit end-users," said the Chinese official.

China earlier this year ordered $1.5bn worth of Airbus aircraft, including 30 150-seat A-320s. The deal broke Boeing's stranglehold on the China market.

WORLD TRADE NEWS DIGEST

Bangkok signs subway deal

The Thai government yesterday signed a $944m contract to build the initial phase of Bangkok's first subway system.

The consortium members, Germany's Bilfinger and Berger, Thailand's Ch Karnchang, and Tokyu Construction and Kumagai Gumi of Japan, said work would be shared equitably, but that revenue and work-sharing details had not been finalised.

Construction of stations for the project is to start early next year. A tender, worth over Bt20bn ($784m), for the second 11km northern phase of the line, is now open, with the same consortium widely expected to win the contract. A tender contract for a further Bt11bn concession for fittings and track for the entire length of the project is expected to be awarded within two years.

Reuter, Bangkok

Italians to build Gulf mosque

A consortium of Italian companies has been awarded a L625bn ($413m) contract by Sheikh Zaid bin Sultan, Abu Dhabi's ruler, to build the largest mosque in the Gulf.

The contract, won by by Impreglio (grouping Fita-Girola-Lodigiani) and the Udine-based Rizzani de Eccher, involves building a mosque with four minarets each 110m high and 138 cupolas. The total mosque area of 84,000 sq m will accommodate 7,000 worshippers in the main prayer area and a further 20,000 in air-conditioned, covered courtyards.

This is the second mosque to be built by this consortium, the first being in Nigeria. The contract was won against bids by Bouygues, Dragados, Dumez, ETI and Skanska.

Robert Graham, Rome

Jet engine orders announced

International Aero Engines, in which Rolls-Royce of the UK is a major shareholder, has announced V2500 engine orders from China and Singapore worth up to $430m. Rolls-Royce's share of the new deals is around $150m.

Singapore Aircraft Leasing Enterprise ordered engines for Airbus A320s with deliveries in January 1998. China Southern announced it would buy seven more Airbus Industrie A320 aircraft following its purchase earlier this year of 10 of the V2500-powered twin-engined aircraft.

The consortium, based in Hartford, Connecticut, comprises Rolls-Royce, Pratt & Whitney of the US, MTU of Germany and Japanese Aero Engines.

Foreign Staff

Bid to end Japan wood tariffs

US and Japanese forestry industry executives yesterday began two days of meetings on the deregulation of Japan's wood market.

The American Forest & Paper Association in September predicted a 20 per cent annual increase in US exports to Japan after Tokyo announced deregulatory moves. These included eliminating requirements to re-test lumber imports, permitting three-storey wood frame construction, and eliminating high tariffs on laminated timber.

The executives are hoping for an agreement to eliminate tariffs on Japanese wood and paper. "Although Japanese tariffs on paper are relatively low, the Japanese paper market remains essentially closed to US and other foreign suppliers," said Mr W. Henson Moore, head of the association.

Nancy Dunne, Washington

Bhutto swamped by a wave of allegations

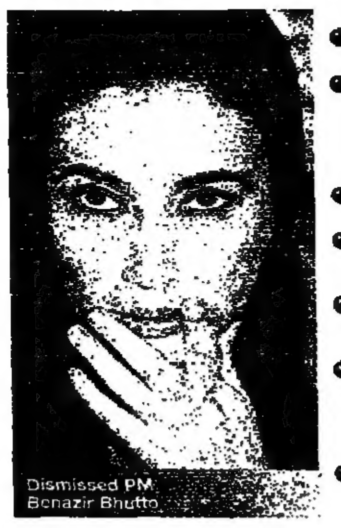
Farhan Bokhari details the political and economic upheaval that toppled Pakistan's premier

Pakistan's prime minister Ms Benazir Bhutto is out of a job again, dismissed on charges of corruption in a repeat of her fate six years ago.

The man who gave her and her government their marching orders on Monday night, President Farooq Leghari, was around the last time she was fired – but then he was her close ally. Indeed, many Pakistanis remember Mr Leghari in a protest march two years later being beaten by police because of his loyalty to Ms Bhutto, by then back in opposition.

But it seems the repeated allegations of corruption and mismanagement against Ms Bhutto's new government, elected in October 1993, were too much for President Leghari. With the necessary nod from the military, he ended her second attempt to bring about the "social revolution" she promised her people.

The rise and fall, and rise and fall of Benazir Bhutto



Dismissed PM Benazir Bhutto

- **1988 November:** Benazir Bhutto becomes prime minister in first free elections after 11 years of military rule.
- **1990 August:** President Ghulam Ishaq Khan sacks government on charges of corruption and political incompetence.
  November: Nawaz Sharif wins election but is sacked in April 1993 by President Khan on charges of corruption and incompetence.
- **1993 October:** Bhutto forms government after PPP emerges as biggest single party in general election.
- **1994:** Sectarian warfare in Karachi, Pakistan's commercial hub, brings civil administration to a halt. In 1995, 2,000 people are killed. Business confidence sinks.
- **1996 June:** IMF suspends disbursements from $600m standby loan, irritated at government's lacklustre budget and reluctance to introduce farm tax.
- **October:** Opposition begins street protests and strikes, demanding Bhutto's resignation. Islamabad, the capital, brought to a standstill.
  Government unveils emergency budget, introducing farm tax. Bhutto relinquishes finance portfolio. IMF restores standby loan.
- **November:** Government dismissed by President Farooq Leghari on charges of corruption and mismanagement.

President Farooq Leghari

They appeared not to take it to heart. There was a heavy troop presence in the country's large cities, including the capital Islamabad, but there were few signs yesterday of public concern at the fall of her government.

In parts of the country such as Karachi's poorest Urdu-speaking neighbourhoods, which have faced the brunt of a recent security clampdown, there were small celebrations in which people gave each other gifts of *laddoo*, or sweetmeat.

Traffic was initially thin in the morning, apparently as fearful motorists stayed off the roads to judge public reaction, but life returned to normal by the afternoon. The only deviation from normal life was the late delivery of newspapers, which had to delay their editions for up to four hours to carry the full text of the presidential order dismissing the government.

The stock market in Karachi was closed yesterday for a local holiday, but share prices jumped on the "kerb" or informal market, and are expected to rise today on the official exchange. Businesses are generally hoping that the investment climate will improve now that the long period of uncertainty has ended.

For many Pakistanis, Ms Bhutto's downfall was unimaginable just months ago when President Leghari was still seen to be on her side (Pakistan's president is elected by members of both houses of the federal parliament and Pakistan's four provincial legislatures). The army said repeatedly that it was in no mood to intervene to halt the growing civil disorder and political mismanagement. The opposition, meanwhile, was divided.

Yet Ms Bhutto did nothing to deflect the pressures which mounted on the president to sack her. Her government almost always dismissed corruption allegations as baseless propaganda.

The charges against Ms Bhutto's government have not been set out in detail yet, but are generally assumed to refer to allegations that Ms Bhutto's husband, Mr Asif Ali Zardari, whom she appointed investments minister, took bribes or kickbacks on the award of government contracts.

The president also accused the government of ignoring the plight of hundreds of Pakistanis who were allegedly killed by security forces in Karachi as part of a clampdown last year.

Pakistan's economic crisis also played a part in the timing of Ms Bhutto's removal. Having failed to meet the conditions of two failed International Monetary Fund programmes since she came to office in 1993, she was forced to negotiate a third one last month after the country's foreign exchange reserves slipped to just $750m, equivalent to only four weeks of imports.

The country's dire shortage of foreign exchange reflects its heavy short-term indebtedness. Foreign debt is officially put at $28bn, but on top of that the government relies heavily on foreign currency deposits in local banks. These total some $8bn of which around $2bn is footloose money, bankers say.

Pakistan thus faces a continuous need to refinance maturing borrowings, a process that became very difficult after revenue projections following the government's budget in June showed Pakistan would fail to meet IMF targets. The IMF suspended drawings on a $600m credit as a result.

Bankers believe that whoever eventually emerges in power in Pakistan will have to stick to this programme or face a serious foreign debt crisis. But the IMF programme is politically controversial because among its Rs40bn ($1bn) in budget measures is a plan to tax agriculture for the first time. Public protests also followed the steep increase in petrol prices that followed the 8 per cent devaluation with which the IMF programme was launched last month.

Meanwhile, Ms Bhutto's downfall has come at a difficult moment for her in the province of Sindh, her vital home base and the bastion of support for the Bhutto family. The killing in September of her estranged brother, Murtaza, by the police in Karachi was followed by anti-government riots.

Chants of "Zardari, you are a killer" heard outside the ancestral home of Ms Bhutto in the city of Larkana illustrated how serious matters had become. The belief among the ruling party's dissidents that Mr Zardari may have ordered the killing gained wider approval later, when Ghinwa, Murtaza's widow formally made that allegation before a Karachi judge.

It is by no means certain Ms Bhutto will be permitted to return to politics. The possibility of criminal charges against her husband and investigations into her own financial dealings were yesterday not being ruled out by members of Pakistan's new interim administration.

The opposition Pakistan Muslim League (PML) welcomed Ms Bhutto's downfall and says it is confident of winning the next elections. However, its leader, Mr Nawaz Sharif, was also tainted with charges of corruption before his government fell in 1993.

A statement from Mr Malraj Khalid, the new prime minister, that free and fair elections could not be held unless the election commission was "powerful and independent", was widely seen as the first important suggestion that politicians may face extensive probes into their financial affairs ahead of the next elections.

Editorial comment, Page 13

The army exercises the power, but shuns the reins

By Farhan Bokhari

Pakistan's army remained silent yesterday, but the presence of troops outside the prime minister's residence spoke volumes.

The soldiers did what they have become so accustomed to over a difficult decade of transition to democracy. Tired and frustrated with Ms Benazir Bhutto's incompetence, the generals encouraged President Farooq Leghari to dismiss his long-time friend.

The army is indisputably the force behind President Leghari, allowing him to be assertive in front of Ms Bhutto. It is also the real power in Pakistani politics. It has watched with irritation and some distaste the efforts of civilian politicians to govern.

General Jahanghir Karamath, a respected career-soldier who became chief of the army staff in 1995, has privately expressed his displeasure to president and prime minister. The excesses of the civilian rulers made him at one with the president. That made yesterday's move easy.

Senior officials predictably sought to play down the military's role yesterday. Though the president enjoys a constitutional prerogative to dismiss a government, there was a sense of a "military coup" in Islamabad. Besides Ms Bhutto's residence, soldiers kept close vigil at other important installations such as radio and television stations, airports and government offices.

Dissatisfaction has run deep among both the generals and the ruled. In recent weeks massed demonstrations, from the business classes to mullahs, took to the streets to demand Ms Bhutto's removal. Before dawn yesterday the soldiers moved in. "This move, although constitutional, could not have occurred without the tacit approval of the army," said Ms Nasim Zehra, a leading security analyst.

Officials say the soldiers will be withdrawn within days, once the new government settles in. Army officers were careful yesterday to avoid gestures suggesting a more enduring and open assumption of the levers of government.

The army has governed Pakistan for more than half its existence as an independent state, most recently for the 11 years to August 1988 under the leadership of General Zia ul-Haq. His death in an air crash paved the way for the transition to democracy.

The soldiers are a pampered class. Defence spending amounts to 26 per cent of this year's budget. That largesse continues in spite of suggestions by foreign donors that Pakistan should reduce its "non-developmental" expenditure, a euphemism for defence spending. Pakistan has resisted defence cuts, arguing its national security was under threat from its arch rival, India.

The economic pressures on defence have also mounted with a 1990 US decision to cut all military and economic aid to Pakistan over allegations that the country was producing nuclear weapons. Pakistan received roughly $7bn in US aid from 1980 to 1990.

Pakistan's economic woes alone are sufficient to force the generals to avoid contemplating a direct takeover of the country, as this would frighten away foreign investors. "Pakistan could find itself as isolated as Burma if that was ever to happen," said a western diplomat. "The army is an important institution but it's one which recognises its limitations."

Yesterday, it brushed aside any perceived limitations. "The army is very visible in this change. It suggests that they are fully behind the president," Ms Asma Jehanghir, a leading human rights lawyer, said.

In recent years, the army has been keen to seek a larger role in UN peacekeeping operations worldwide in a gesture to raise the country's global profile while also allowing Pakistani troops to work with troops from other countries.

It has also been rewarded recently for staying on the sidelines. The 1990 sanctions on Pakistan imposed by the US were eased for the first time this year when Washington agreed to allow the delivery of some of the $1.4bn worth of blocked equipment.

US 'encouraged' by China nuclear arms sales stance

By Sophie Roell in Beijing

The US has been "encouraged" by China's apparent willingness to exercise stricter control over possible export of nuclear technology to facilities not covered by international safeguards agreements.

Ms Lynn Davis, US under-secretary of state for arms control and international security issues, said after two days of talks in Beijing she hoped the Chinese would live up to commitments to prevent sales of technology to "unsafeguarded" facilities.

"I am encouraged by the steps the Chinese are taking," she told reporters.

This week's discussions were a follow-up to a May commitment from Beijing to stop unauthorised transfers of nuclear technology. The US had accused China of selling ring magnets to Pakistan for the nuclear industry. Beijing denied the accusations at the time.

Ms Davis said she accepted that China's leadership had no knowledge of the sale, which the US believed was made by a state-owned company. Washington is demanding Beijing come up with specific measures such as export controls or licensing procedures to stop such transactions. The US, she said, was looking for a "comprehensive and rigorous system so these commitments can be carried out".

Ms Davis also said the May agreement had laid an "important foundation" for the eventual implementation of a 1985 Sino-US peaceful nuclear co-operation accord which would allow US companies to sell China nuclear power generation equipment.

Congress has delayed acceptance because of continuing concerns about China's assistance to countries such as Pakistan which are accused of trying to develop nuclear weapons.

Ms Davis also urged China to join a group of 33 nations in halting sales of conventional weapons to Iran. "We are particularly interested in preventing proliferation of weapons to Iran and other rogue states," Ms Davis said.

The US sought to reassure China that its arms sales to Taiwan were consistent with its "one-China policy". Beijing opposes such sales.

Ms Davis's talks, which were aimed at paving the way for a visit to Beijing later this month by Mr Warren Christopher, the secretary of state, are part of efforts to establish a regular dialogue with China on security issues. Ms Davis said that regularising the global security dialogue was an "important step in bilateral relations".

Rights meeting imperils Apec harmony

By James Kynge in Kuala Lumpur

Malaysian human rights groups, defying government pressure, announced yesterday that they will go ahead with a controversial conference on East Timor which officials say could strain ties with Indonesia.

The conference, which may attract more than 200 representatives mainly from regional non-governmental organisations, has placed Malaysia in a delicate diplomatic predicament. Although it is unofficial, Malaysian officials are worried that the meeting may offend its large neighbour to the south.

The meeting from November 9 to 11 is expected to highlight alleged human rights abuses in East Timor just a week before the Asia Pacific Economic Co-operation (Apec) forum is to be held in the Philippines.

Apec, a grouping of Asian and Pacific rim countries including the US, had its 1994 meeting in Indonesia overshadowed by East Timorese demonstrations, and activists have said that they plan more protests at this year's Apec meeting.

This year the question of East Timor, a former Portuguese colony annexed by Indonesia in 1976, is particularly sensitive after Mr Jose Ramos-Horta, a campaigner for East Timorese independence, won the Nobel Peace Prize along with a fellow activist last month.

Mr Ramos-Horta, who is reviled by Indonesian authorities, was invited to attend the Malaysian conference but he said in a statement yesterday that he had decided to stay away to "avoid putting Malaysia in a difficult position with the Indonesian government".

He added that he admired Dr Mahathir Mohamad, Malaysia's prime minister, whom he hoped could play a positive role in resolving conflicts in East Timor.

Malaysia regards the question of East Timor, which the United Nations continues to recognise as a territory administered by Lisbon, as Indonesia's internal affair.

Nevertheless, the non-governmental organisations preparing to stage the conference, which is called the Second Asia Pacific Conference on East Timor, appealed to Kuala Lumpur to become involved in finding a peaceful solution to the conflict in the territory.

"Malaysia has strived for peaceful resolutions of the long-running conflicts in Palestine, South Africa, Cambodia, Bosnia and (the Philippine island of) Mindanao. We should take a similar stand to support a speedy and peaceful solution to the East Timor situation," Mr Sanusi Osman, a representative for the conference organisers said.

But far from getting involved, Malaysia appears keen to divorce itself from the problem as emphatically as possible. Mr Megat Junid, deputy home minister, said the cabinet was concerned that the conference – if it goes ahead – would damp a scheduled visit to Indonesia by Dr Mahathir.

Some representatives of the human rights groups said they were worried that Malaysia might now try to ban the conference. They added that they were keeping secret the names of people who planned to attend from abroad, in case the authorities attempted to bar them from entering the country.

ASIA-PACIFIC NEWS DIGEST

Slower growth hits Singapore

Singapore's economy grew by 3.2 per cent year-on-year in the third quarter of 1996, the city state's worst growth rate in a decade. Following the announcement the government revised down its 1996 growth forecast to about 6 per cent, the second time this year it has trimmed the forecast.

Mr Lee Hsien Loong, deputy premier, ruled out drastic policy adjustments to cope with the downturn. "This slowdown is merely cyclical and not caused by a loss of competitiveness," he said, although indicating the government was studying the problem of industrial land being sold at inflated prices to multinational companies. Mr Lee cautioned that slower growth was expected for a "few quarters" until external demand picked up.

The third-quarter downturn was blamed on a weak manufacturing sector. Singapore has been hit by a global slowdown of the electronics industry triggered by softening demand, excess capacity and an oversupply of components.

AFP, Singapore

Sri Lankan regulators quit

The five directors of Sri Lanka's main foreign and local investment regulatory authority resigned yesterday, following a directive from President Chandrika Kumaratunga, officials said. Mrs Kumaratunga plans to reconstitute the Board of Investment (BOI).

The government gave no reason for the action but it is believed there have been differences of opinion between two senior cabinet ministers and several BOI members, including its chairman, Mr Thilan Wijesinghe. Officials, however, said Mr Wijesinghe, a close aide of Mrs Kumaratunga, was likely to be re-appointed to the BOI soon.

Amal Jayasinghe, Colombo

Support for Indian coalition

India's nine-party coalition government of Prime Minister H.D. Deve Gowda has been boosted by the decision of its key backer, the Congress (I) party, not to withdraw support. However, the party issued a warning that the United Front should not take its support for granted.

Congress, the coalition's biggest backer although not a member of the UF government, also listed several areas, including fiscal and foreign policy where it said the government was inadequate.

Congress was angered by the UF's refusal to back the party in the politically sensitive state of Uttar Pradesh.

AFP, New Delhi

Strike halts shipments of Thai air cargo

By Ted Bardacke in Bangkok

A strike by more than 1,000 air cargo handlers has blocked shipments of nearly three-quarters of outbound cargo from Bangkok's Don Muang airport and forced into the open a controversial government decision to privatise the cargo services of state-owned Thai Airways International.

The workers, employees of the Cargo and Mail Department of Thai Airways, went on strike on Monday. Most outbound cargo of Thai Airways and other regional carriers which rely on Thai Airways ground staff – including Cathay Pacific Airways, Singapore Airlines, China Airlines, Korean Airlines and Malaysian Airlines – remained locked in storage areas. Thai Airways was not accepting inbound cargo at airports around the world.

The strike comes at a delicate time for Thai exporters, who are rushing to fill large Christmas orders of textiles and electronics at a time when the country's export growth rate has fallen to the lowest level in a decade.

Workers are protesting against a cabinet decision to give Thai Airways' cargo business to a new company in which Thai Airways would be the largest single shareholder but be deprived majority control. The workers fear they will lose benefits and eventually be made redundant.

The airline said its cargo department would carry on normal operations after the new cargo company was established and that employees would keep their jobs with the airline. But a company spokesperson could not say what the workers' jobs would be if the new company takes over the operations of the cargo department, as expected.

The decision to separate Thai Airways' cargo service from its passenger operations, originally made by the former government of Chuan Leekpai in 1994, had been hailed by exporters as a way to streamline operations at Don Muang airport. Labour peace was expected as Thai Airways was to hold a controlling 49 per cent stake in the new company and private sector partners were to be selected through an open tender process.

But without calling bids, the lame-duck government of Mr Banharn Silpa-archa decided to lower Thai Airways' stake to 35 per cent, with an additional 5 per cent for Thai Airways employees. A controlling stake was awarded to a group led by a private company, Commercial Transport International (26 per cent) and Thai Military Bank (24 per cent).

A main shareholder of Commercial Transport International, Mr Anusak Indarapuvasak, is also director general of the state-owned shipping company, Thai Maritime Navigation, an organisation which has a monopoly on military transport under the supervision of the ministry of communications and transport.

That ministry is controlled by the New Aspiration party, led by Gen Chavalit Yongchaiyudh, defence minister, who has been an avid supporter of commercial projects for the Thai armed forces.

The Thai military's influence over Thai Airways, which it used to control, has been waning in recent years although it is still considered an obstacle to the professional management which now runs the airline.

Analysts said awarding Thai Airways' cargo operations, which accounts for 17 per cent of the company's revenue, to a group with ties to the military was part of the continuing struggle within the airline.

Kazakhstan gets its first credit rating

By Kevin Done in London and Sander Thoenes in Almaty

Kazakhstan, the central Asian republic rich in oil and gas resources, was given BB- speculative grade credit ratings by two of the leading US and European rating agencies yesterday.

In receiving its first rating, the country, which is preparing to make its first Eurobond issue, was put on the same level as Russia by Standard & Poor's of the US but assessed more cautiously by IBCA, the European agency. Russia was rated BB+ by IBCA last month, Ba2 (the equivalent of BB) by Moody's of the US, and BB- by S&P. Credit ratings reflect perceived risk of default by a borrower.

Moody's, the other leading US rating agency, is also understood to have assessed Kazakhstan recently, but it failed to release any rating yesterday.

Ratings of BBB-/Baa3 and higher, which have been awarded previously to Slovenia, the Czech Republic, Poland, Slovakia and Hungary among the former communist countries of east Europe, are investment-grade, while ratings of BB+/Ba1 and lower, so far awarded to Romania, Lithuania and Russia are speculative grade.

A strong rating, implying reduced risks to investors, usually means lower funding costs for the borrower.

The Kazakhstan ratings disappointed some western economists and business executives in Almaty.

The World Bank, the European Bank for Reconstruction and Development and Japan, backed the country's reforms last week by pledging nearly $1.35bn for balance of payments, technical and investment support in 1997.

IBCA said Kazakhstan's potential as an oil and gas producer, with reserves rivalling those of Kuwait, was enormous, but being landlocked made it dependent on its neighbours for access to western markets. The planned pipeline through Russia to the Black Sea would raise oil exports by over 50 per cent within two years.

Russia was "likely to continue to exercise enormous influence" over the Kazakh economy and had recently cut off the electricity in northern and eastern Kazakhstan, said IBCA.

Kazakhstan, independent since December 1991, had slipped into arrears twice in servicing foreign debt in the past three years, and lack of a track record as an independent state was "a key constraint" on its credit rating.

S&P said "a sharp tightening" of fiscal and monetary policies had allowed Kazakhstan to stabilise its economy this year with a steep fall in the rate of inflation.

Goma looters reveal facade behind regime

Michela Wrong visits the east Zaire town now in the hands of rebels

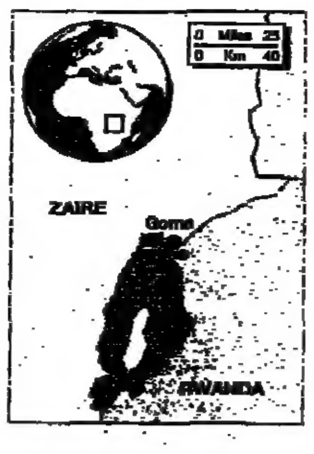
As a symbol of the emptiness at the heart of President Mobutu Sese Seko's vainglorious 30-year regime it was hard to beat.

The presidential villa on the outskirts of the eastern Zairean town of Goma, in the hands of rebel forces and Rwandan soldiers who routed the army at the weekend, had been pillaged.

But the looters found little of any real value, because almost everything in the apparently sumptuous estate, perched on the banks of Lake Kivu, was fake.

Ornate chandeliers, gilt mirrors and a brass wall clock decked with eagles and lions lay piled in the corridor, ready for loading. A suspiciously new Oriental rug had been rolled up and a portrait of "the Guide" himself, moulded from Zairean copper, was propped against the wall.

But no one had bothered to move the huge dining table, moulded from marble-imitation plastic, the four "Ming" vases, with their price labels still stuck to them, or the Romanesque plinths inlaid with artificial malachite.



African leaders yesterday called for urgent deployment of a neutral force in eastern Zaire to protect over 1m refugees dependent on a United Nations Security Council decision, reports Reuter. The call was in a final statement read out in front of the leaders in Nairobi by Mr Kalonzo Musyoka, Kenyan foreign minister. "The summit requested the UN Security Council to take urgent measures to ensure establishment of...safe corridors and temporary sanctuaries by deploying a neutral force," he said. The summit, which was not attended by any Zairean representative, called on Mr Boutros Boutros Ghali, UN Secretary-General, and Mr Salim Ahmed Salim, his counterpart at the Organisation of African Unity, to co-ordinate on the move. The presidents of Kenya, Eritrea, Rwanda, Tanzania, Uganda and Zambia and the prime minister of Ethiopia attended the talks on Africa's most serious crisis since the 1994 genocide of Tutsis in Rwanda in the same "Great Lakes" region.

A local resident, strolling through the villa decorated in what could only be described as "African-leader kitsch", revelled in the humiliation of the man whose recent illness has contributed to the defeat of the national army, pushed out of north and south Kivu provinces.

"It is good to see Mobutu finished," he said. "His power, his strength is gone."

The Presidential Guard responsible for security had not, it seemed, put up much of a fight before withdrawing on Thursday. In their quarters, rooms were stacked with boxes of unused ammunition and guns.

Also largely untouched was the garage, holding five black Mercedes, two ambulances and a Land Rover adapted to allow the 66-year-old leader to address his restive public. Its registration plate: a single, huge "P", presumably for president.

Mr Mobutu only ever visited once but, as with every European monarch, the villa was kept primed for his imminent arrival. In the upstairs suite, the cravats worn with his "abacost" – the collarless jacket he ordered Zaireans to adopt in the 1970s – lay ready.

In the first lady's suite the choice of perfume was poignant: "Je Reviens". For Mr Mobutu, said by his spokesman to be about to fly to Kinshasa after more than two months of treatment in Switzerland for prostate cancer, is unlikely to return. Goma, officially opened up for the first time yesterday to journalists massed at the border, is now firmly in alien hands.

Nervous residents emerging from their shelters were informed on local radio by Mr Laurent Kabila, the rebel ethnic Tutsi leader who first surfaced in south Kivu, that an alliance of four political parties was now in control.

The fighters manning checkpoints on all roads into town, far more disciplined than the Zairean troops they replaced, are a motley crew from both north and south Kivu and as far away as the southern province of Shaba. Some are Tutsis, some indigenous Zaireans, all apparently committed to Mr Mobutu's downfall.

But despite repeated claims by Rwanda that it is not involved, there was no denying yesterday the backing behind the revolt, apparently aimed at ousting the Hutu extremists operating out of the refugee camps strung along the border.

Soldiers speaking Kinyarwanda, the national tongue of Rwanda, were openly touring town, shooting repeatedly into the air to scatter locals sifting through the abandoned shops.

"Who are these men, are they Rwandans?" we asked a local resident, clearly wary of being seen talking to journalists.

"Affirmative," he muttered from the corner of his mouth. "We know their morphology."

And the victors were showing the same media savvy they have displayed since the start of the conflict. Residents said journalists had only been allowed into Goma once Rwandan Red Cross workers had cleared away more than 400 bodies from the streets.

The road to the airport, still scattered with bodies, was barricaded, as was the route to the west, making it impossible to discover the condition of 500,000 Hutu refugees who are fleeing further into Zaire to escape the fighting.

The pretence of Rwandan non-involvement was almost half-hearted.

Near the border, a soldier with the aquiline features typical of a Tutsi inquired what conditions in town were like.

Told that looting was still going on, he said: "They are Zaireans, they know no better. They are starving, that is why we are being nice to them."

Then he turned away, abashed at how much the remark revealed about his own origins.

Sanctions make for a mixed-up market in Iraq

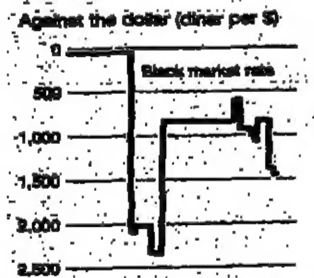
Roula Khalaf penetrates the secrets of Baghdad's bourse

On the floor of the Baghdad stock exchange, the main event moving the market yesterday was the US presidential election. Investors gathered behind a glass window were nervous and sent the men and women brokers orders to sell.

On the surface, the Baghdad stock exchange is an ordinary capital market, more lively than many others in the Arab world. Opened in 1992, one year after United Nations sanctions were imposed in Iraq, the market has 98 listed companies and a capitalisation of about ID84bn. This equates to about $47m at the current rate of 1,800 dinars to the dollar on the black market where most dollars are traded in Baghdad.

Iraqi dinar

Against the dollar (dinar per $)



Source: Reuter

Companies in sectors ranging from industry to tourism issue annual reports and crowds of investors flock to the exchange twice a week for a two-hour session. Many of the companies shifted to private hands during a brief privatisation drive in the late 1980s. Shares were traded unofficially for years among friends in social clubs and eventually moved on to the bourse. Stock exchange officials said investor interest had grown so much that the bourse was being moved to a larger location.

But, like everything else in Baghdad, the stock exchange, where stocks are quoted in dinars, does not respond to rational market forces. Investors pay little attention to revenues and earnings of companies or to economic indicators; the official Iraqi economy was devastated by sanctions and the government does not publish official statistics.

Instead, the market is speculative. It offers another way of playing the US dollar's fluctuation against the local currency. Strangely, officials said the market seems to decline when the dollar is expected to rise against the dinar as well as when it is expected to fall. To prevent the market crashing, the government allows it to move up to only 10 per cent in either direction during every session.

The US election should have little bearing on Iraq since sanctions, preventing Iraq from selling its oil and from buying anything other than humanitarian goods, are not likely to be lifted in the near future, regardless of who sits in the White House.

The oil-for-food deal Iraq agreed with the UN last May, allowing it to sell $2bn worth of oil every six months in exchange for food and medicine, has been put on hold since Iraq's incursion into the Kurdish north in late August. The UN has said the north remains too unstable for the deal to go through.

Mr Walid al Saadoun is a civil engineer who had to look for another line of work when sanctions were imposed and construction business dried up. He became one of the 46 brokers on the exchange. "It is not a particularly fruitful business, but at least it gives me something to do," he said.

Mr al Saadoun said investors yesterday viewed the US election as good news, though he could not understand why. When investors in Baghdad anticipate positive developments, the dinar's black market value against the dollar rises.

So investors sell their shares in dinars because they expect to be able to buy more dollars with their dinars. "People prefer to hold dollars and measure their wealth against the dollar," Mr al Saadoun said.

There are other speculators, however, who try to push the market down when they expect the dollar to rise. They sell their shares in dinars and buy dollars on the black market in order to resell them for more dinars at a later date. "The market falls on good and bad news," said a stock exchange official. "It only goes up when the dollar value is stable."

Mr al Saadoun said the market's performance is understandable. "When sanctions force a doctor to work as a food wholesaler, a teacher becomes a taxi driver and a civil engineer turns into a broker, what you get is a mix-up, and the economy here is mixed up."

Blair takes hair advice to woo votes

By George Parker, Political Correspondent

Mr Tony Blair, leader of the main opposition Labour party, has flattened his bouffant hairstyle as part of a campaign to build bridges with Britain's women voters, who are less susceptible to his political charms than men.

Tony Blair is to visit more 'feminine' environments

Mr Blair's hairstyle was identified by Labour focus groups as one of the more frivolous explanations for his relative unpopularity with women.

Last month, a Mori opinion poll showed that only 43 per cent of women were satisfied with his performance, compared with 60 per cent of men.

Senior Labour women MPs are advising Mr Blair on a strategy to recapture the female vote, fearing the gender gap has grown in recent months and could prove a serious handicap to the party's hopes of winning the next general election.

The difference in voting patterns between men and woman can be decisive. In some US states Mr Bill Clinton would be in trouble against Mr Bob Dole if men alone were allowed to vote, but the president typically enjoys a lead of 20 points or more among women.

The Labour leader has agreed to undertake more high-profile visits to "feminine" environments, instead of to conferences where he is often surrounded by businessmen in suits. Tomorrow he will visit London's Great Ormond Street hospital for sick children with his wife, Cherie, a high-flying lawyer.

Broker's trial by computer

Fidelity still battling with disruption caused by new system

The travails of Fidelity Brokerage Services provide a cautionary lesson to businesses planning to install a new computer system.

The firm, which buys and sells shares for clients without giving investment advice, tried to combine the implementation with a big sales push. Administrative chaos followed.

As a result, FBS last week closed to new private client business until the end of January at the request of the Securities and Futures Authority, the stockbroking regulator.

This is a heavy blow for the company. FBS was taking on between 100 and 200 new private clients a week. Thanks to the debacle "it is inevitable some existing clients will go to a different stockbroker," Mr David Plucinsky, FBS president, said.

If FBS fails to bring customer service back to a level acceptable to the SFA by the agreed deadline, it faces disciplinary action. This could include a fine.

The firm's problems began when it launched a marketing campaign to promote self-select personal equity plans (Peps), a tax-efficient form of investment for sophisticated private investors. It failed to anticipate a flood of applications to set up plans before the March 31 deadline for tax exemption in the next financial year. Paper-based administration could not process these quickly enough to prevent a backlog developing.

The difficulties deepened in April, when FBS started using the Tarot settlement and record-keeping system produced by computing company TCA Synergo. This is used without apparent problems by several other brokers, including Barclays Stockbrokers.

FBS says Tarot often ran more slowly than was required. It was also unable to perform some basic functions. For example, according to the broker, it could not issue quarterly income payments to some clients who had requested them. Tarot also sometimes failed to sweep the cash that built up in clients' share accounts when stock was sold to interest-bearing accounts or to pay it out as cheques.

Meanwhile, some staff lacked the skills to extract promptly enough the information clients needed from Tarot. According to Terence Chapman, chairman of TCA Synergo: "Tarot is functionally very rich. You need to carry out effective training and re-engineer the whole business process to make best use of it."

The problems, human and electronic, combined to reduce steeply the level of service, something on which FBS had previously prided itself as part of the US-based broking company, Fidelity Brokerage Group, which in turn is part of the financial services business Fidelity Investments.

Share certificates went missing. Customers were left waiting for months for payments, in one case of up to £75,000 ($122,250). Staff neglected to call customers back with information.

All but 85 of the 850 complaints that resulted have been resolved by FBS – but it is now bracing itself for a second wave.

It fears there may be errors in the 19,000 half-yearly statements sent out to its 10,000 Pep customers at the end of last week and has set up a special 22-member team solely to deal with resulting queries.

Last week, Mr Sherif Nada, president of Fidelity Brokerage Group, flew in from Boston where the company is based, to negotiate with the SFA. The resulting agreement included FBS closing to new business.

The brokerage now has the staff to give a good service, according to Mr Plucinsky. About 60 are fully trained to use Tarot, compared with 40 when the crisis began.

They are sorting out the problems with the help of 25 staff seconded from Fidelity Broking Group in the US and 25 employees of a consultancy that Mr Plucinsky declined to name.

Mr Plucinsky said that most computer bugs which directly damaged customer service had been fixed. Those which remained were a problem for staff rather than clients, he claimed.

FBS says it will compensate clients hit by the debacle. Those who have lost money – for example, by missing out on interest when dividends were paid late – are expected to get cash payouts.

For those who have been inconvenienced without losing money, charges will be waived.

Jonathan Guthrie

UK NEWS DIGEST

Call to curb TV violence

Mrs Virginia Bottomley, the chief national heritage minister and Mr Michael Howard, the home secretary, yesterday mounted a campaign against what they see as unacceptable levels of violence on television and in films and videos.

Mrs Bottomley wrote yesterday to the chairmen of the BBC, the Independent Television Commission and the Broadcasting Standards Council, calling urgent meetings to see what more can be done "to ensure that television programme makers and broadcasters take full account of the standards acceptable to today's viewers".

Sir Christopher Bland, chairman of the BBC, Sir George Russell, chairman of the ITC, and Lady Howe, chairman of the BSC, have been asked to submit a report by the end of this month saying what measures they have taken to deal with government concerns on violence, and any further proposals.

The same request has been made by the home secretary to the British Board of Film Classification on violence in films. Mr Tom Sackville, home office minister, said that significant cuts in the levels of violence in videos and on television must be made. *Raymond Snoddy*

■ OXFORD UNIVERSITY

Dons reject business school plans

Oxford dons yesterday dealt a surprise blow to the university's leadership by rejecting plans to build a £40m ($65.2m) business school funded by Mr Wafic Said, the Saudi entrepreneur.

The university's congregation, or academic parliament, voted 259 to 214 against the siting of the school on a greenfield site at the heart of the city. The issue is now likely to be resolved by a postal ballot of more than 3,000 academics and administrators towards the end of the month.

Mr Alexander Murray, a history tutor at University College who led the opposition in congregation, said: "I am amazed and delighted by what has happened. I am very glad the university has recovered its integrity because it was in danger of losing it."

Proposals for the business school have proved controversial with academics, university staff and local councillors since Mr Said announced his donation of £20m to build the new college in June. *Richard Wolffe*

■ SINGLE CURRENCY

Pro-Europeans warn City of risks

Pro-European MPs yesterday warned the City of London of the risks of the UK staying outside the single European currency as they launched a campaign laying out the positive case for monetary union.

"The City could find the playing field decisively tilted against it," the MPs claimed in a document circulated to banks, financial institutions and industry. The pamphlet, "The other side of the coin", published by the European Movement, says there is a danger of the UK being outmanoeuvred in the negotiations over access to key part of the new financial system.

The MPs attempt to refute some of the "fanciful" allegations made by the opponents of UK membership. The European Movement's campaign was welcomed by Lord Kingsdown, former governor of the Bank of England, the UK central bank, as a "useful and pragmatic contribution to the debate." *David Wighton*

■ MUSIC BROADCASTING

Plans to rival MTV Europe

As many as three consortia are considering plans to launch music cable and satellite television channels in the UK to rival MTV Europe, the pan-European music channel.

Granada, the media and leisure concern, has held exploratory discussions with four of the UK's largest record companies about proposals to introduce a specialist music channel.

Virgin, Mr Richard Branson's leisure group, has begun negotiations with BSkyB, the satellite television venture, regarding proposals to establish a joint venture to run another music channel.

The BBC last week unveiled plans to launch a television version of Radio 1, its pop station, in a proposed joint venture with Flextech, the US-owned cable and satellite channel operator.

Established record companies approached by Granada are interested in increasing their involvement in broadcasting. The four – PolyGram of the Netherlands, the UK's EMI, Warner of the US and Japan's Sony – are already involved with Viva!, a German music channel which successfully competes against MTV Europe in that market. *Raymond Snoddy*

■ CABLE TELEVISION

Industry accuses satellite venture

The cable industry yesterday accused British Sky Broadcasting, the satellite television venture, of impeding the entry of alternative channels and programme providers into the UK pay television market.

The complaint was made in a formal response to the Office of Fair Trading's consultation on the proposed new BSkyB "rate card" which would determine the wholesale price cable operators pay for BSkyB television channels.

If the cable industry cannot persuade the OFT that the proposed rate card should be modified, it plans to push for a Monopolies and Mergers Commission inquiry and will also take the issue up with the European Commission in Brussels. *Raymond Snoddy*

■ PUBLIC TRANSPORT

Operator to buy 914 new vehicles

FirstBus, the country's biggest bus operator, is buying 914 new vehicles as part of an £80m replacement programme over the next two years. It is the privatised industry's first substantial order for custom-made buses.

The group, which this year acquired Greater Manchester bus company in the north-west and Strathclyde bus company in Scotland, has placed orders for 584 vehicles, worth £50m, for the year ending March 31 1998. All the bus bodies will be made in the UK by Alexander of Scotland, Wright of Northern Ireland and Plaxton of England. The chassis will be made by manufacturers abroad, including Volvo, Scania and Mercedes. FirstBus, which commands 20 per cent of the UK bus market, said the new vehicles would be used to replace old buses in its existing fleet. *Motoko Rich*

■ MANUFACTURING OUTPUT

Data suggest recovery spreading

UK manufacturing output grew modestly last month, suggesting that the economic recovery is now spreading from the services sector to become more firmly entrenched in industry.

Manufacturing output grew a seasonally adjusted 0.3 per cent in September, compared with a fall of 0.3 per cent in August, the Office for National Statistics said yesterday. Mr Simon Briscoe, an economist at Nikko, said the modest recovery in manufacturing output meant that there was no need for another interest rate increase. He said rates were not likely to change until after the general election, which is expected early in 1997. *Graham Bowley*

Spending rise rules out big cuts in tax

By Robert Peston, Political Editor

The UK cabinet yesterday agreed to increase public spending in real terms next year, at the price of ruling out big tax cuts in the forthcoming Budget.

The prevailing view at the top level of government is that the electoral prospects of the ruling Conservative party will not be significantly enhanced by substantial income tax reductions, but that a schools or health service funding crisis would be very damaging.

Ministers approved increased allocations for hospitals, schools and the police. These will not be offset by swingeing cuts in any big spending departments.

A senior member of the government said yesterday that the main spending total used in the annual expenditure negotiations – called the control total – is likely to be about £1.5bn ($2.44bn) less than the £268.2bn pencilled in a year ago.

This would represent a cash increase of almost £7bn on the current year's planning total and is more than that needed to keep pace with the 2.25 per cent inflation rate predicted.

The outcome represents a victory for Whitehall's big spenders over Mr William Waldegrave, the Treasury's chief minister in charge of keeping public expenditure under control. In the early autumn, he had hoped to shave £3bn from the planned control total.

The settlement means net tax cuts are unlikely to exceed £2bn, ruling out any prospect that the 24p basic rate of income tax will be cut by more than 1p.

Among the big winners was the health department, which secured an estimated additional £600m for hospitals on top of the £34.2bn earmarked.

Mrs Gillian Shephard, the education minister, obtained a relatively generous settlement for schools, at the expense of a squeeze on university funding and resources for training and enterprise councils. Mr Michael Howard, the home affairs minister, was said to be delighted by the allocation for the police and prisons.

Michael Portillo: squeezed

However the Treasury won a partial victory over the defence minister, Mr Michael Portillo, who faced intense pressure to cut military support services. A colleague of Mr Portillo's said yesterday that although he had been forced to accept a squeeze, the stability of the armed forces would not be undermined.

In social security – the biggest spender with a £90bn budget – cash payments to single parents will be frozen for a second successive year and there will be a further crackdown on fraud. However, more radical measures to trim benefit entitlements have been dropped because of the risk they would fail to get through parliament, given the government's slim majority.

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Manchester chooses $815m rebuild plan

By Richard Wolffe in Manchester

Manchester, in north-west England, yesterday launched an ambitious £500m ($815m) four-year project to rebuild its centre, which was destroyed by an IRA bomb in June.

The new city centre will feature a Millennium Centre modelled on the Pompidou complex in Paris, a pedestrian street leading to the cathedral, and a radical redesign of the Arndale centre, the city's main shopping complex.

A panel of business and political leaders yesterday announced the winning team of architects and urban designers which will mastermind the reconstruction. Led by EDAW of London, the team beat 27 rivals to redesign 23.6 hectares of the city centre, extending well beyond the buildings damaged by the terrorist attack.

More than 200 people were injured by the 1,500kg bomb, which devastated one of the UK's busiest shopping areas.

Some 670 businesses had their premises destroyed, including UK retailer Marks and Spencer.

Most have found temporary accommodation near the Arndale centre. These including M & S, which plans to build its largest UK store close to the bomb site.

Sir Alan Cockshaw, chairman of Manchester's judging panel, said: "We want to create the very best city centre in the whole of Europe, fit for the 21st century, and one which the people of Manchester can be very proud of."

The government is expected to fund about £100m of the reconstruction, particularly for infrastructure projects. Ministers have already diverted £20m of European Union funds from the wider north-west region into the city.

But much of the finance is likely to come from insurance claims and £400m is expected from the private sector. The project's leaders will also attempt to convince five landlords – who control most of the centre – to renovate or demolish their own buildings. They said they were prepared to use compulsory purchase orders as a last resort.

The most dramatic part of the new city centre involves the demolition of the unpopular Shambles Square and the sideways move of the medieval Shambles pub, which stands on piles.

The 1960s Arndale centre is to be redesigned with glazed walkways and a covered Winter Garden.

Electric shuttle buses will ferry shoppers from car parks and tram stops into the heart of the new city centre.

Scheme helps employment data shine

Results of US-style workfare encourage its expansion

Project Work, the closest Britain has come to US-style workfare, is set for rapid expansion following early evidence from a government pilot scheme in two different parts of Britain in which recipients were obliged to work for benefit payments.

Two pilot schemes for up to 8,000 people – at Medway and Maidstone in Kent, in the south-east of the country, and in Hull, in the north-east – have resulted in a high proportion of candidates leaving the unemployment register, although only a small number are known to have jobs.

Mrs Gillian Shephard, the chief education and employment minister, who will detail more of the expansion plans this week, said: "The early results from the first pilots have been impressive. Project Work is having a significant effect in helping people who have been out of work for a very long time and who really want a job, and in weeding out those who don't."

Under the scheme, people aged between 18 and 50 who have been unemployed for more than two years receive 13 weeks of intensive help in searching for a job, followed by 13 weeks of compulsory work experience. Those going on to work experience receive an allowance equal to their benefit plus £10 ($16.30) per week. Refusal to attend results in loss of state benefit.

So far, 2,481 people have been on the pilot scheme at Medway and Maidstone. To date, 30 per cent have left the register after the first 13 weeks, and a further 37 per cent have left the register at the second, compulsory work experience stage. Similar results have been reported from Hull.

Of the Kent clients, only 120 are known to have filled vacancies advertised in a Jobcentre (state employment office). More may have found jobs and not notified the Employment Service, but even so the figures seem at odds with Mrs Shephard's recent claim that "many have found jobs".

She seemed much closer to the mark when she said: "A noticeably high number have simply ended their claim on referral to mandatory work experience. This suggests that the approach is particularly effective in deterring those whose claims are not genuine."

Ashley Ashwood

Enjoying their work: Tilly March (in the stripes) and Grace Beament at the old people's centre in Maidstone

Mr Bob Keen, project manager at Maidstone, declined to speculate about people's reasons for leaving the register, but added: "There is a bit of carrot and stick. The black economy is always there."

Mrs Shephard first chose to flag the expansion of Project Work at the ruling Conservative party's conference in September, even though the pilots will run until July. It may seem rash to spend a further £70m in expanding the scheme – the move is planned for early next year – to another 100,000 people across the country before the pilots have been fully evaluated, but the potential rapid payback in terms of lower unemployment figures has clearly proved to be irresistible.

The Trades Union Congress has called Project Work a step down the road to workfare. The main opposition Labour party described it as a gimmick.

Labour has also criticised the lack of training and education on the scheme. But the party has said it is ready to remove benefit from unemployed people aged under 25 who refuse offers of a job or more education. Given Labour's determination to root out benefit fraud, the opposition will also be taking careful note of the numbers leaving the register.

But Project Work is not just about forcing people off the register. It can also provide inspiration and confidence, according to Mr Geoff Jones, training manager for Community Link, one of the private sector organisations which is organising the work experience element.

"Lots of people have had so many rejections that they have lost the will to look for work," he said. "This gives them hope – they have just got into a rut of not applying for work."

Ms Tilly March, 22, has not worked since leaving school. She is now working at an Age Concern day care centre in Maidstone, helping in the kitchen and caring for the elderly clients. She said: "I didn't like being forced into it, but it's all right once you're here."

Also at Age Concern's centre, Ms Grace Beament, 23, has been unemployed for two years, having previously worked at another old people's home she did not like.

She said: "I like it here. It is good experience and I hope it will get me a good reference."

Andrew Bolger

Caroline Southey on the controversy surrounding the EU's eco-labelling scheme, especially in the copying paper sector

Confusion of profusion

You can find them on products from light bulbs to loo paper. But, in the name of a good cause, there is a risk that industry is being alienated and consumers are becoming confused.

The root of the problem is the growth in the number of eco-labels – markings awarded by the European Union only to products which meet environmentally-friendly standards.

The labels have a dual aim: to encourage industry to market greener products and to give consumers information about products which are environmentally less damaging.

But do eco-labels fulfil these two goals? The question is being asked more urgently following the European Commission's recent decision to press ahead with two new eco-labels – one for copy paper and the other for refrigerators.

The EU eco-label system is voluntary, the idea being that market forces will lead to wider use once a few companies begin actively using them as marketing tools. "The idea is to encourage competition between companies by getting them to fit eco-labelling into their business strategy," says one EU official.

The criteria needed to qualify for the EU's eco-labels have been drawn up by the Commission for 11 products since the scheme's inception four years ago. The process has involved long consultations with industry federations, companies and environmental pressure groups. The products include washing machines, paper kitchen rolls, laundry detergents, paints and varnishes, bed-linen and T-shirts, copying paper, light bulbs and refrigerators. The Commission is working on plans to extend the regime to footwear, stationery products, batteries and personal computers.

But the EU regime has been dogged by controversy. Industry is divided over the merits of the scheme. As a result only a small number of companies, 11 in all, have applied for the awards in some of the product categories. For some products, such as textiles and dishwashers, no applications have been forthcoming.

The biggest take-up has been in the paint and varnishes sector, which has attracted 80 per cent of the applications. Among them are ICI Paints of the UK, Alcro-Beckers of Sweden and Tintas Dyrup of Portugal.

EU officials believe that the patchy response is partly due to the fact that some sectors are "very sensitive to environmental issues" while others are "not yet ripe" for this sort of marketing tool.

Companies have opted to stay with the national or regional label rather than switch to the EU-wide system

But industry's cool response is rooted in a number of factors. The first is that the EU is littered with various national eco-labels, such as the "white swan" in Scandinavia and the "blue angel" in Germany, which companies have been reluctant to relinquish. The take-up for the national labels has been high in some countries and for some products. The "white swan," for example, now appears on 70 per cent of some paper products in Scandinavia.

Companies have opted to stay with the national or regional label rather than switch to the EU-wide system because consumers have become familiar with the local logos. "In countries where eco-labelling is widely used the local labels define green products which customers can recognise. Companies don't want to give them up," says Victor Sundberg, environmental officer for Electrolux, the Swedish appliance group.

Industry analysts believe this trend could be counterproductive. "There has been a proliferation of labels. It is becoming harder for industry to know which label to choose," says Simon Goss of Euratex, the EU textile federation which represents 120,000 textile and clothing companies.

EU officials concur. "It is confusing for consumers. This proliferation could devalue the eco-label scheme and lead consumers not to trust labels at all," says one.

Goss admits that "in practice the EU label is a good thing. Harmonisation would help. It is impossible to sell something with 15 labels on it".

But, he adds, the EU schemes are unattractive to industry, another leading contributing factor to the failure of the EU labels. Criticisms of the EU scheme vary from industry to industry, but some common points are that it is cumbersome and costly and that the criteria for the first batch of products were poorly defined and impractical.

"The Commission was often on a collision course with industry when it first set up the scheme. It has now realised that the system cannot work unless it has industry on its side," says Sundberg.

A prime example of poorly defined criteria was the eco-label for dishwashers. First introduced in late 1993, the scheme attracted no applicants. "The criteria for water consumption were too low. On the other hand, the performance criteria were too high. There was absolutely no incentive to apply," says an official from a leading manufacturer.

The Commission has subsequently withdrawn the label and EU officials admit mistakes were made. "On the basis of our first experiences we are developing a more consistent approach to make sure the criteria are practical and technically applicable," an EU official says.

The changes are part of a broader overhaul of the EU's eco-labelling regime which includes streamlining the application and award process. Companies complain that it takes too long for applications to be processed by the national bodies which manage the scheme under the umbrella of the European Eco-label Organisation.

The Commission will also address the concern that the labels are too simplistic. "It is no good offering a simply black-and-white choice. A product might be less green because it has not got the label, but it does not mean it is not green," says Sundberg.

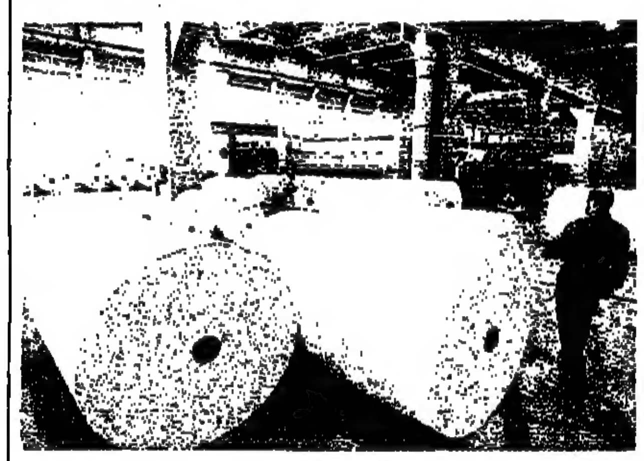
Some sectors argue the labels should offer some differentiation by grading products. This could be modelled on the EU's compulsory label for energy consumption which grades products according to the rate at which they use energy.

Despite all the difficulties there is a strong body of opinion that the EU's eco-labelling will attract wider interest in the longer term. "The EU scheme is gathering momentum. The Commission has gone through a learning process and is now taking a more pragmatic approach. There will probably never be a stampede for eco-labels, but I believe they will become increasingly popular," says Goss.

Information Technology

The Business and the Environment page now runs on the first Wednesday of each month, when the FT IT survey appears. FT IT returns to the Technology page next week.

Paper warfare



Tony Andrews

Rules on rolls: EU regulations target production processes

Controversy still rages over the European Commission's recent decision to press ahead with an eco-label for copying paper.

This particular eco-label has provoked more passion than any of its predecessors, drawing fire from the paper industry on both sides of the Atlantic.

Eco-labels for the paper sector are not new – companies have already applied for the EU's kitchen towels and toilet paper label. Fort Sterling, a British company, uses the EU's eco-label on three makes of kitchen towel and toilet paper.

In Scandinavia more than 70 per cent of some paper products carry the local "white swan" eco-label. Leading paper retailers say the labels have become an integral marketing tool for a majority of pulp and paper producers.

"The labels help us to market products. Most big buyers want to know whether we carry the white swan before they will buy the product," says one leading Swedish paper retailer.

But even Scandinavian paper producers are rethinking their eco-label policies. The reason is that the criteria for paper eco-labels differ from those for all other products in that they target the production process, not just the product.

"Companies are obliged to act on the production process. In all the previous cases of eco-labelling we have only called for modifications to the product," an EU official explains.

The criteria which companies are invited to meet to qualify for the EU label include cutting chlorine and sulphur emissions as well as energy consumption during the manufacturing process. Paper mills must also meet water effluent limits.

An additional criterion is that companies must be able to provide documentary proof that the product comes from wood fibre that has been grown in environmentally-protected forests. The Commission believes this will encourage sustainable forest management.

But leading paper manufacturers complain that it is impossible to keep modifying production techniques to meet criteria which are revised every two to three years.

"We work in a capital-intensive industry. The technical life of equipment is 10 to 20 years. It is not possible to alter this every few years," says Carl-Johan Alfthan, technology director for Modo Paper Husum in Sweden.

The Confederation of European Paper Industries also believes the criteria discriminate against some producers because they favour companies which produce pulp and paper against those that buy in their pulp.

In addition, the American Forest and Paper Association believes the labels could pose a severe trade barrier and are pressing the US administration to refer the issue to the World Trade Organisation.

But EU officials believe that the federations are more hostile to the eco-label scheme than the companies they represent.

"The eco-labels are designed to create competition. Federations do not like encouraging competition between their members. It is not something that they can openly support," says one EU official.

CS

ARTS

Television/Christopher Dunkley

Nine new shows – in reverse order

The old idea of television making seasonal programme changes three times a year, discarding whole lists of series and introducing new ones, is virtually dead. Network controllers still use the arrival of autumn as an excuse for extra ballyhoo about new programmes, but the truth is that these days new series start every week. My notebook for last week includes nine new series and, using television's own established practice, we shall employ a points system and consider them in reverse order.

■ One out of 10: *Sometime, Never* (ITV Sundays). A half hour comedy based upon such tired ideas that you wonder how it got beyond the planning stage. Max, a loud-mouthed female teacher, is passed over for promotion in favour of a Thatcherite younger woman whose ambition is (typically contrived joke) "to close a school of her own one day". Max lives in the basement of a house owned by her friend Bernice. Both women are stone-age feminists. Bernice cannot leave Kevin to feed their children because "Last time I did we had to have their stomachs pumped and I found sawdust".

■ Two out of 10: *Billy Connolly's World Tour of Australia* (BBC1 Mondays). The series set in Scotland, combining travelogue scenes of Connolly visiting old haunts with excerpts from his one-man shows was nearly very good. The poignancy of the childhood memories and the exultant swearing in the effortlessly funny stage act sparked off one another splendidly. The attempt to do the same thing in Australia is nearly very bad. Connolly now exploits his own celebrity status, enthuses over everything like David Bellamy on speed – "Un-be-*lieve*-able!" he bellows repeatedly at the Sydney Harbour Bridge – and works ancient material to death. Scorning "person-hole-covers" was funny in 1969.

■ Three out of 10: *The Mind Traveller* (BBC2 Thursdays). Oliver Sacks also comes dangerously close to celebrating his own celebrity. The subject of this opening programme, in a series promising a journey "through the mysterious folds of the brain", was fascinating: a disease capable of taking very mild or appallingly extreme forms, and limited to a tiny area of Guam. But Sacks' royal progress among the sufferers put you in mind of a ward round by James Robertson Justice. The result was television's version of a raree-show.

■ Four out of 10: *Staying Alive* (ITV Fridays). ITV decided that since its nine o'clock drama slot had now contained 926 crime series the time had come for a hospital series, there having been a mere 874 of those. Hence this bedpan saga set in the Gilmore Hospital, wittily known as the Kill More. Episode 1, which was a sort of Magnificent Seven round-up with all the characters being introduced, tried to achieve the speed and impact of *ER* but felt instead like *Casualty*. Formula drama, proficiently made, it will probably do its job and hold up the ratings for the advertisers in this key evening slot.

■ Five out of 10: *Wanted* (Channel 4 Sundays). A game show which takes the idea of *Treasure Hunt*, adds more money, more people dashing around the country, pursuers on the lines of *The Fugitive*, expert commentators in the studio (a former member of the Flying Squad and double agent Oleg Gordievsky) and as presenter, for no obvious reason, right wing newspaper columnist Richard Littlejohn. The determination to inject drama by arranging to have the hunters close behind the hunted while the programme is on the air looks strained, but if Boy Scout wide games are your thing you may enjoy this.

■ Six out of 10: *Accused* (BBC1 Sundays). Yet another courtroom drama, looking remarkably like Granada's *Crown Court*. Nobody would plan for a half-hour drama series to run from 11.35 until after midnight on a Sunday, so something must have gone wrong here. Too downbeat? The opening story of a young heroin addicted prostitute, trying but failing to break away from an evil pimp, was certainly not the merriest way to end the weekend. But Christopher Reason's script was taut, and the acting was good.

■ Seven out of 10: *Where's Elvis This Week?* (BBC2 Sunday). British chat shows are in the doldrums because producers have focused on the presenters instead of the guests and very few presenters are up to it. This series goes back to the idea of concentrating on the guests. Better still it has a new wheeze: to interpret the Americans for the British and vice versa. Made in New York, with an American host (Jon Stewart, bright and capable) it has two American guests and two British who try to sort out just how we come to be two cultures divided by a single language. This week's subjects – fitness, obesity, sitcoms – worked well, although the British guests, Martin Clunes and David Baddiel, were much livelier than their American counterparts.

■ Eight out of 10: *Third Rock From The Sun* (BBC2 Thursdays). An American comedy which sounded doubtful but proves remarkably effective. Here is a sitcom which actually depends for its com upon a strong and unusual sit: four aliens assume human form to study the human race. Portraying human habits, social conventions and emotions in literal fashion, as seen through the eyes of an alien, does make homo sapiens look like homo idioticus. Mr Spock has been milking the gag for decades in *Star Trek*, but it is still funny. A male alien at a party kisses a female guest who slaps his face, so when he leaves and the hostess pecks him goodbye on the cheek he slaps her confidently round the chops. A female alien who starts crying is asked by a fellow alien "What *are* you doing?" and replies incredulously "Leaking apparently", and so on. Funny.

■ Nine out of 10: *Soho Stories* (BBC2 Mondays, Tuesdays & Wednesdays). A verité documentary series about life in the area of London's West End which specialises in strip joints, restaurants, prostitution, the cinema industry and much besides. I began going to Soho to buy secondhand books when I was 11. Today I record a radio programme once a week in a Soho basement. In the intervening 40 years people have repeatedly told me that "Soho isn't what it was" and they are right. That is its strength and part of its charm: immigrants, wannabes, crooks and geniuses are always passing through. Monday's episode showed the Soho synagogue closing, which was sad, but Christopher Terrill who has made this wonderfully fluid and entertaining series on a modern lightweight camera, seemingly virtually alone, understands his subject well enough to know that something else will open. Via this series we already know Danny the drag artist and Gerard the director at the Raymond Revuebar as well as viewers know the characters in soap operas. Why end *Soho Stories*? Just run it three times a week indefinitely: the world's first documentary soap.

Focus on non-verbal effects: Rachel Sanders as Ariel in Shared Experience's new production

Mike Kwasniak

Concerts/David Murray

Chailly in elegiac mood

The conductor Riccardo Chailly has been touring Spain with the London Symphony Orchestra, and at the Barbican last week he led them in a pair of concerts: early Britten with late Mahler on Wednesday, and on Thursday early Schoenberg followed by the whole first act of Wagner's *Die Walküre*.

Not what one might expect from an Italian conductor; but Chailly's repertoire is uncommonly wide-ranging. To all this music he brought a full measure of conviction, and the LSO's playing for him was alert and beautiful. If there was anything slightly "foreign" in his readings, it was the near-absence of flexible Teutonic *rubato*, at least in the non-operatic music: Chailly likes very steady tempi.

So treated, Britten's *Sinfonia da Requiem* sounded particularly elegiac and distanced, almost marmoreal – no note of hysteria in the "Dies irae", and only temperate consolation at the close. Mahler's Tenth Symphony, played here in the version completed by Deryck Cooke, Berthold Goldschmidt and the Matthews brothers, was infinitely melancholy and limpid. Its extraordinary dissonant counterpoints became transparent, and the finale ethereally poignant.

Schoenberg's *Verklärte Nacht* shared the same tone on the next night. Little *Sturm und Drang* in the workings-out, but perfect poise and gentle radiance in the final "transfiguration"; Chailly used Schoenberg's later, subtler transcription (1943) of the sextet for string band, and made all its details glow.

In the long *Walküre* act he supplied richly sensitive support for his three singers. His Sieglinde was the young Swedish soprano Katarina Dalayman, who made an enormous impression: absolute confidence, power and delicacy as and when required, a lovely mezzo-ish timbre (which always suits this role). Better German would help: in that respect, Wolfgang Schmidt's superb diction as Siegmund left Dalayman's words sounding disappointingly muzzy.

Schmidt's intelligent, thoroughly professional performance grew more impressive as the act progressed. His tenor has a hard ring, and in *forte* a distinct component of paint-stripper; but he was tirelessly equal to the formidable demands of the role, and managed to shift into a softer, gentler mode for a few blessed moments.

By contrast Gudjon Oskarsson sang the brutal Hunding in a most mellifluous, unthreatening bass – a pleasure to hear, if not exactly a vintage brute. Musically, this was an outstanding account of one of the most inspired acts of the *Ring*; and I should add special thanks to the LSO cellos, who seized their sumptuous opportunities with a will.

Theatre/Alastair Macaulay

This 'Tempest' hits the rocks

It is dismaying how seldom Shakespeare's plays are alive on the British stage today, despite the great frequency with which they are revived. Actors and directors here behave in Shakespeare as they seldom do, curiously, in Ben Jonson or Marlowe; they treat him as a too-familiar premise for fancy performing style, for striking visual effects, for clever reinterpretations – but they cannot be bothered to tell the stories in an innocent way that will help newcomers to his plays.

The new Shared Experience staging of *The Tempest*, mildly pretentious and extremely dull, is just the latest example of this depressing and decadent trend. Watching it, you cannot help but discuss the things Shared Experience have chosen to read into or impose upon Shakespeare; but there is almost nothing to be said about the actual words that Shakespeare wrote, for these are so flatly (and artificially and crudely) delivered that they reach your ear dead, stillborn. This kind of production usually angers me. *On* this occasion, since I watched it with three friends who were seeing *The Tempest* for the first time, I felt also very sad.

Here, what we were encouraged to focus on was all non-verbal: effects vocal or scenic or gestural or physical. A mime prologue showed a sexual encounter between Caliban and Miranda interrupted by Prospero. You could scarcely hear Caliban's transcendent speech of how "The isle is full of noises" because you could not get past the semi-strangulated vocal tone and English-as-a-second-language elocution with which Richard Willis uttered it.

Sure, Ariel (Rachel Sanders) sang fairly pleasantly some very pleasant music; but few of the words she sang could be made out. Even Trinculo's classic joke about "The State totters" and Miranda's radiant "O brave new world" exclamation fell flat. *Miranda (Rebecca Jackson)* spoke in an exaggeratedly artless, adenoidal, wild-child manner, and Ferdinand (Adé Sapara) so lisped that, when, after the performance, I read again the lines in which he praises her, my friends realised they had simply not taken in a word he had been speaking. There were worse than this: Alonso, Sebastian, Gonzalo, Antonio. The freshest speaking came from Lucas Hare in the smallest roles.

But why blame individual actors? Nancy Meckler, artistic director of the company and director of this production, must take responsibility. In recent years, I have seen Michael Cashman play several Shakespearian roles. As Prospero in this production, he takes further the worst tendency he has shown in them – steady monotony of utterance – without any *sign of his* real virtues as an interpreter. Hardly had the play begun than, by chanting his long narration to Miranda in ash-grey tones and leaden emphasis of metre, he lost his audience and delivered a death-blow to the play. An entirely meagre performance.

Meanwhile, of course, physicality and what people now call "theatricality" abounded. Prospero and others played meaningfully with meaningless piles of sand around the stage; the white sails of the ship, having tossed to show a tempest, became moving screens to effect changes of scene; the storm was also demonstrated by waves and criss-crosses of movement, some with ropes; and Miranda did several mock-exotic gestures to demonstrate her alien nature. Wind noises sounded through – drowning or muffling – several important episodes. Some of Peter Salem's music was far more poetically alive than any of the text.

Yes, Meckler's production has virtues, but they are virtues that Shared Experience (a company known for its physicality and in particular for its adaptations of novels) has stuck all over *The Tempest* like luggage labels. The play itself is left a lifeless and inconvenient blank which Shared Experience covers with style, style, style.

At the Wolsey Theatre, Ipswich, until November 9. Then touring.

Bottomley argues the heritage case

Heritage secretary Virginia Bottomley is in Leeds today, telling the British Urban Regeneration Association how the arts and the heritage can breathe new life into depressed inner cities. She is speaking at the new Royal Armouries Museum, one of the few success stories from the Private Finance Initiative, and the most ambitious development in a city that has gladly embraced tourism and the arts after the decline in its textile industry.

But Bottomley's words are not for the converted but for the sceptical in the Treasury. At the last moment she is still trying to influence the Budget on November 26. As things stand now her own budget at Heritage, of £960m, will be cut to pay for more hospital beds and reductions in taxes.

She faces a hard task arguing the case for Heritage. The Arts Council is terrified that its promised reduction of £3.2m for 1997-98, leaving it with just under £183m, will be greater. Some pessimists forecast a £10m incision, which would force the council to make invidious choices, protecting some while sacrificing others, perhaps to closure. In the event Bottomley might keep the grant reduction to £5m.

The problem is that Bottomley is fighting her corner weighed down with lottery money: £2.4b of lottery funding has already been pumped – or promised – into communities; the arts alone have benefitted with £650m and heritage with £300m. Of course John Major, who created the lottery, pledged it would provide additional money to be concentrated on capital projects but its very presence makes it easy for the Treasury to insist that Heritage takes its place with other ministries in financing lower taxes.

All Bottomley can do is to try and convert some lottery money into revenue funding through wider access schemes and the stabilisation fund, while pointing the arts towards other sources of income. Local authorities, with over £200m, give more to the arts than the Arts Council; the Foundation for Sport and the Arts is worth over £20m a year; arts sponsorship weighs in with £80m; and there is the Single Regeneration money and European Development Funds. She wants to direct attention away from the Arts Council and its annual whinge. She also wants to make the point that at least she, and John Major, believe in lottery funding of the arts.

Antony Thorncroft

INTERNATIONAL ARTS GUIDE

■ AMSTERDAM

CONCERT

Concertgebouw Tel: 31-20-6718345

● Rotterdams Philharmonisch Orkest: with conductor Tuomas Ollila and pianist Olli Mustonen perform works by Tippett, Beethoven and Nielsen; 3pm; Nov 9

■ BERLIN

CONCERT

Konzerthaus Tel: 49-30-203090

● Leipziger Streichquartett: perform Beethoven's String Quartet in F major (based on Piano Sonata No.1, Op.14), String Quartet No.1 in F major, Op.18 and String Quartet No.1 in F major, Op.59; 7.30pm; Nov 7

DANCE

Staatsoper Unter den Linden Tel: 49-30-20354438

● Ballett der Staatsoper Unter den Linden: perform Michail Fokine's Les Sylphides to music by Chopin, Le Spectre de la Rose to music by Von Weber, and The Dying Swan to music by Saint-Säens, Vaslav Nijinsky's L'Après-Midi d'un Faune to music by Debussy and Bronislava Nijinska's Les Noces to music by Stravinsky; 7pm; Nov 8

■ COLOGNE

CONCERT

Kölner Philharmonie Tel: 49-221-2040820

● Gürzenich-Orchester and the Kölner Philharmoniker: with conductor Leopold Hager and violinist Torsten Janicke perform works by Tchaikovsky, Szymanovsky and Dvořák; 8pm; Nov 10 (11am) ; 11, 12

■ COPENHAGEN

DANCE

Det Kongelige Teater Tel: 45-33 69 69 69

● Hamlet: a choreography by Peter Schaufuss to music by Sort Sol and Langgaard, performed by the Royal Danish Ballet and the Royal Theatre Orchestra; 8pm; Nov 8

EXHIBITION

Ny Carlsberg Glypothek Tel: 45-33 41 81 41

● 125 Years of Danish Sculpture – Danish Sculpture Around 1900 and Carl Jacobsen: on the occasion of the 125th anniversary of Den Danske Bank, a series of exhibitions is presented at 18 art museums and galleries all over Denmark under the title "Danish Sculpture in 125 Years". Each exhibition provides a comprehensive survey of what has happened in the field of Danish sculpture since the era of the Classicist sculptor Bertel Thorvaldsen; to Nov 17

■ DUBLIN

CONCERT

National Concert Hall – Ceoláras Náisiúnta Tel: 353-1-6711888

● Garda Gala Concert: concert in aid of the Irish Wheelchair Association, featuring the Band of An Garda Síochána with conductor John King, baritone John Roche and tenor Michael Lang, the Garda Síochána Male Voice Choir with music director/ baritone Peter McBrien, and the Lady Singers led by Irene Thompson. The works performed range from classical music to traditional military airs up to popular music; 8pm; Nov 7

■ FRANKFURT AM MAIN

OPERA

Städtische Bühnen Oper, Ballet, Schauspiel Tel: 49-69-21237444

● Semiramide: by Rossini. Conducted by Sylvain Cambreling, performed by the Oper Frankfurt. Soloists include Sally Wolf, Dagmar Pecková, Harry Peeters and José Medina; 7pm; Nov 9

■ HAMBURG

OPERA

Hamburgische Staatsoper Tel: 49-40-351721

● Die Entführung aus dem Serail: by Mozart. Conducted by Bernhard Klee, performed by the Hamburg Staatsoper; 7pm; Nov 8, 10

■ LONDON

CONCERT

Barbican Hall Tel: 44-171-6384141

● Buenos Aires Philharmonic Orchestra: with conductor Garcia Navarro, pianist Bruno Leonardo Gelber and the Royal Philharmonic Orchestra perform works by Brahms, Turina, De Falla and Ginastera; 7.30pm; Nov 7

Wigmore Hall Tel: 44-171-9352141

● Wolfgang Holzmair: recital by the baritone, accompanied by pianist Imogen Cooper. The programme includes works by Schubert, Fauré and Ravel; 7.30pm; Nov 8

DANCE

Peacock Theatre Tel: 44-171-314-8800

● 2: a choreography by Edouard Lock to music by Pop and Bryars, performed by La La La Human Steps. Soloists include Louise Lecavalier; 8pm; Nov 5, 6, 7, 8

Royal Opera House – Covent Garden Tel: 44-171-2129234

● The Prince of Pagodas: a choreography by Kenneth MacMillan to music by Britten, performed by the Royal Ballet. Soloists include Darcey Bussell and Jonathan Cope; 7.30pm; Nov 7

■ NEW YORK

CONCERT

Alice Tully Hall Tel: 1-212-875-5050

● Christopher Parkening, David Brandon and Jubilant Sykes: the guitarists and baritone perform works by Sanz, Praetorius, J.S. Bach, Sor, De Falla, Granados, Albéniz, Villa-Lobos, Domeniconi, and others; 8pm; Nov 7

Avery Fisher Hall Tel: 1-212-875-5030

● National Chorale: with conductor Martin Josman perform Mozart's Requiem; 8pm; Nov 8

Carnegie Hall Tel: 1-212-247-7800

● San Francisco Symphony: with conductor Michael Tilson Thomas and violinist Anne-Sophie Mutter perform works by Harrison, Penderecki and Berlioz; 8pm; Nov 7

Merkin Concert Hall – Abraham Goodman House Tel: 1-212-5013330

● Carlo Grante: the pianist performs works by Godowsky; 8pm; Nov 7

■ SAN FRANCISCO

CONCERT

Louise M. Davies Symphony Hall Tel: 1-415-864-6000

● Wiener Symphoniker: with conductor Rafael Frühbeck de Burgos and pianist Rudolf Buchbinder perform works by Mozart, Beethoven and Brahms; 8pm; Nov 8

■ STOCKHOLM

EXHIBITION

Kungl. Akademien för de Fria Konsterne (Royal Academy of Fine Arts) Tel: 46-8-232945

● The face of the 18th century – C.A. Ehrensvärd: exhibition devoted to the draughtsman, caricaturist and writer Carl August Ehrensvärd (1745-1800). Ehrensvärd, strongly influenced by the antique, is mostly known for his landscapes and caricature drawings; to Nov 10

■ VALENCIA

CONCERT

Palau de la Música i Congressos Tel: 34-6-3375020

● Orquesta de Valencia: with conductor Manuel Galduf, oboist Miguel Morellá, bassoonist Juan Sapiña, violinist Enrique Palomares and cellist Maria José Santapau perform works by Haydn and Bruckner; 8.15pm; Nov 8

■ VIENNA

DANCE

Wiener Staatsoper Tel: 43-1-514442960

● Manon: a choreography by Sir Kenneth MacMillan to music by Massenet, performed by the Wiener Staatsopernballet. Soloists include Simona Noja, Roswitha Over, Vladimir Malakhov and Tamás Solymosi; 7.30pm; Nov 7

Listing compiled and supplied by ArtBase The International Arts Database, Amsterdam, The Netherlands. **Tel: 31 20 664 6441. E-mail: artbase@pi.net**

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10.00
European Money Wheel

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Financial Times Business Tonight

Edward Mortimer

Deadly confusion

Western leaders could stop the turmoil in central Africa if they were willing to signal a readiness to intervene

Two letters in The Times yesterday sum up the European debate about central Africa.

One, from a former British ambassador in the region, advocated military intervention in eastern Zaire – by whom is not entirely clear, but apparently western countries "with African participation". The other, from a professor of politics, says that "order can only be restored in the Great Lakes region through the emergence of effective domestic regimes which are capable of governing responsibly", and that this process "can only be lengthened by the incursion of foreign troops".

My instinct is to agree with the latter. The case for intervention was strongest two-and-a-half years ago in Rwanda, where the then government embarked on a deliberate genocide of the Tutsi minority, killing at least half a million before it was overthrown by the Tutsi-led Rwandan Patriotic Front. The outside world did nothing until it was too late. France then intervened in the area still controlled by the defeated government, stopping the killing but also, perhaps unintentionally, helping the killers to escape.

Since then the same killers have operated from UN-supplied refugee camps in Zaire. Rwanda has become the Israel of central Africa: a state led by survivors of genocide with an understandable contempt for "world opinion" (except that of the US), who rely on their own military strength rather than diplomacy to deal with hostile neighbours and irredentist refugees on their borders.

In this analogy, Zaire is an outsize Lebanon. Its weak government can control neither indigenous factions nor foreign refugees. Rwanda's new leaders, with their fellow Tutsi who rule Burundi, decided to take advantage of this chaos rather than endure its consequences. They have intervened to help a friendly group of "rebels", armed and trained by themselves, gain control of a strip of land along the frontier, driving the refugees and guerrillas out of it. The human consequences are horrific – as in Lebanon, but on a larger scale.

So once again there are calls for "humanitarian intervention". This is an oxymoron. Humanitarian action focuses purely on the relief of suffering, while military intervention involves attempting to remove its causes.

In this case the political aim of intervention is even less clear than usual. Some say it should organise the (presumably compulsory) return of the refugees to Rwanda; others that it should help them reach safety further inside Zaire. Yet others argue it should redraw the ex-colonial frontiers, giving separate homelands to the apparently irreconcilable Hutus and Tutsis – involving ethnic cleansing on an epic scale.

While the international community dithers, Zaire may take action on its own account. It is very much bigger than Lebanon, and indeed than Rwanda and Burundi together. Its president may be dying of cancer in France and its regular army may be unpaid, poorly equipped and ill-disciplined. But it has a highly trained presidential guard, as well as generals and opposition leaders eager to exploit wounded national pride in their struggle for the succession.

General Eluki Monga Aundu, the chief of staff, has publicly denounced the present government's passivity, demanding a free hand for the armed forces "to drive the invaders out of the national territory". Reports from Kinshasa allege that weapons are pouring in from France and Egypt in preparation for a large-scale air and ground attack on Rwanda within the next two or three weeks.

If that happens, the whole region will descend into a free-for-all, with the armies of several states fighting each other and mass flows of refugees in all directions.

Could it be stopped? Probably yes, if one or more major powers signalled a clear intention to intervene. If France, the UK or South Africa – or all three – issued an ultimatum to Rwanda and Zaire to respect each others' borders or face hostile military action, the two governments would almost certainly comply – certainly if visible preparations were made for such action.

But intervention could not stop there. There would have to be a demilitarised zone along the border, policed by an international force. The refugees would have to be disarmed and either resettled or repatriated, the leading war criminals among them identified and sent to the international tribunal in Arusha for trial. The operation would be neither quick nor cheap.

Such an ultimatum is most unlikely to be issued, because none of the governments concerned can predict how it will react when things get worse.

As Hugh Hanning argues in a brilliant short book* published tomorrow, this inability to anticipate the reaction to unpleasantness has been a leading cause of war in this century. In 1914, 1939, 1950 (Korea), 1982 (the Falklands) and 1990 (the Gulf), Britain and/or the US went to war in reaction to aggression – but only after giving the aggressor every reason to suppose they would not do so. This was because they themselves had not decided they would intervene.

In the cold war, by contrast, Nato made its willingness to fight crystal clear, and its resolve was never tested.

Will the west end up fighting in central Africa? If things get bad enough, I suspect we will. The tragic irony is that if only we could decide that in advance, we might not have to.

Five Wars, One Cause: Why we need Peace Crimes Tribunals, Parapress

Helpless: the victims of western indecision

LETTERS TO THE EDITOR

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Keynes' concepts misunderstood

From Mr Robert Solomon.

Sir, Michael Prowse's polemic against Keynes ("Spurning Keynes", November 4) ignores history, misrepresents the views of today's Keynesian economists, fails to do justice to Keynes' contributions to our understanding of how economies work, and is mean-spirited.

Prowse fails to note that the *General Theory* was published during the Great Depression when the problem was massive unemployment and the US was certainly not consuming too much. More important, it led to a revolution in our understanding of what makes economies move as they do. The concept of aggregate demand and what influences it is at the heart of modern-day thinking about the business cycle.

Prowse misrepresents economists of the Keynesian persuasion. He fails to note that, with a few exceptions, they are in the vanguard of those pressing for reduction of the budget deficit in the US, not telling politicians "to borrow and meddle".

Finally, Prowse tells us that respected economists such as Paul Samuelson, whom he mentions and whose photograph is shown, embraced Keynes' teachings because it gave them the opportunity to save the world by entering government and managing the nation's affairs. As it happens, Samuelson has never "entered government".

Robert Solomon,
guest scholar,
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US

From Mr W. Stanners.

Sir, Michael Prowse hits an easy target in Keynes' "convoluted and often incoherent musings" which "told left-leaning academics what they wanted to hear", but seems unaware that this style was required to counter a self-serving and equally tendentious right-leaning establishment, which "advocated policies that would promote the flexibility of all prices including wages", as Prowse approvingly puts it.

This formulation treats labour as a mere commodity, which may be the only way of putting it into an equation, but is obviously false. Water has never been known to complain if its abundance reduces its price to near zero, but people whose labour value drops below subsistence level will not quietly starve. Keynes noticed that labour units were also people (and also, that when they returned home they were transformed into consumers and savers), but he judged that "it is my fellow economists, not the general public, whom I must first convince". His so-called "general theory" was his convoluted but highly effective, way of reaching, out-debating, and out-jargoning this benighted audience.

W. Stanners,
49b Fen End,
Over, Cambridge, UK

Ethos key to boardroom change

From Mr Stuart Bell MP.

Sir, The Confederation of British Industry, in its corporate governance report prepared for Sir Ronnie Hampel's committee, may well have rejected suggestions that economic stakeholders should be represented in company boardrooms ("Two-tier German boards rejected", November 1), but they did not do so in the context of the policies of New Labour.

Put simply, the policy of New Labour is to seek to change the cultural ethos of companies so that they can be more inclusive and forward-looking. We do not believe legal prescription is the most useful route to achieving progress to that objective.

On the two-tier board, New Labour has been fully aware of the CBI view for some time. We have raised the possibility of providing companies with the option, should they choose to exercise it, of adopting a two-tier board structure.

We shall study the CBI submission very carefully, as we shall study the eventual report of Sir Ronnie Hampel. They are both important contributions to the corporate governance debate, building on the reports of Cadbury and Greenbury which we have supported.

Stuart Bell,
shadow minister for trade and corporate affairs,
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Restructuring challenge more complex

From Mr Chris Gentle.

Sir, I agree with much of Stephen Roach's Personal View (October 22). He is quite right to argue that both Europe and Japan are very different economies and that they will not follow the same path as the US.

However, what needs more explanation is exactly how Europe will respond to the challenge of global competition that the US economy has met so effectively. An understanding of this must be based on a more sophisticated analysis of Europe against the US. It is not simply a case of how quickly this restructuring will take place.

Take healthcare. Europe manages to provide higher-quality healthcare delivery at less than half of the cost of the inefficient US system. I argue, in my recent book *After Liberalisation*, that there is a limit to the amount of deregulation that Europe can take after it has undergone the present round of restructuring it is now experiencing. This is because the social and economic fabric of Europe would tear under such a wrenching experience.

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Naive view of pension liability

From Mr Willem H. Buiter.

Sir, The Commons social security committee's report, Unfunded Pension Liabilities in the European Union, is politically naive and economically illiterate ("Pensions debt stirs Emu debate", November 1).

Many continental EU members have more generous unfunded state pension schemes than the UK. Demographic developments and disappointing productivity growth make it impossible to finance present and future benefits with existing contribution rates.

This conflict is not confined to social security, but extends to present and future taxpayers and beneficiaries of public spending and existing holders of public debt. It is a national political issue.

The UK is relatively favourably positioned, although the steady increase in the public debt-gross domestic product ratio indicates that the situation here too is worsening.

With or without Emu, there is no chance of the UK taxpayer picking up the tab for the continental pensioner. The Maastricht treaty explicitly forbids it.

The argument that a European Central Bank could be blackmailed into monetising the unfunded pension liabilities of our continental partners is rich, coming from a country with one of the least independent central banks in the EU and a mediocre inflation record. The euro may turn out to be softer than the D-Mark is; it will be harder than the pound.

If cash-strapped governments attempt to borrow their way out, this will raise interest rates throughout the EU. This is a consequence of financial market integration, not of Emu. The notion that the UK can insulate its real interest rates from the rest of Europe by retaining monetary autonomy is an illusion.

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Out of the sweetshop

UK utilities are taking a more grown-up approach to foreign investment, says Jane Martinson

After privatisation in the 1980s, many UK utilities were so eager to spend their cash on foreign ventures that they were likened by investment analysts to children in sweetshops: they bought anything they could see – and were then sick.

The privatised utilities – power generators, gas and water companies – have spent an estimated £4bn on international diversification, according to Mr Bill Dale, utilities analyst at SBC Warburg, the investment bank. And most of the ventures have so far lost money.

Now the utilities, which began to announce their interim results last week, want to prove they have grown up. They have started taking a more rigorous approach to operations overseas. "There is a far more focused approach now than there ever was before," says Mr Dale.

In recent months some utilities have sold the worst lossmaking companies bought in the first flush of diversification. Others have pulled out of overseas competition altogether. But several have continued to expand abroad and have stepped up efforts to convince shareholders of the long-term potential of these investments.

Executives say exposure to foreign markets is particularly important because tight regulation of privatised utilities in the UK – including price controls – is making it difficult to increase profits at home. "There is no way we can effectively improve efficiency and profits in the UK forever," says Mr David Luffram, finance director at Thames Water.

The experience of Thames is a salutary lesson in international diversification. In the four years after privatisation in 1989 Thames spent more than £120m on overseas businesses, including Utag, a German process engineering company which failed to deliver expected revenues from eastern Germany following reunification. By the time Thames sold Utag and another engineering company last month, they had made operating losses of at least £70m. The London-based utility had already announced a £95m write-down in March, mostly to reverse its overseas policy. Mr Luffram accepts that Thames made mistakes. Instead of concentrating on its core water supply and sewerage businesses overseas, "we went into design and construction and fell flat on our faces".

Thames has moved away from such "non-core" businesses, but it remains committed to overseas expansion. Presenting its interim results last week it emphasised the potential of six contracts it has won this year from Turkey to Australia, which work on the build, own and operate model and are managed in partnership with local companies. The group won its first such water and sewerage contract in Malaysia last September, at the start of the review which eventually led to the write-down and a management reshuffle.

Anglian Water, which services the east of England, disclosed yesterday that it had lost £8.5m in its international division in the first six months of this year. It expects to continue losing money abroad until the end of the century. But Anglian is also emphasising its determination to win more overseas contracts.

Such projects may lose money at first and can be risky. But they can also yield high returns over the life of a 20-year contract. Thames believes its foreign operations could be contributing £30m or about 8 per cent of pre-tax profits by 2000.

Other groups have also been at pains to emphasise the long-term benefits of their overseas strategies. In September, National Power, the generating company which has invested more than £800m in overseas ventures in the past five years, announced that it expected to earn £30m after tax from foreign operations in this financial year. In 1997-98 it believes this will increase to £95m, or about 11 per cent of total estimated earnings.

Other, smaller UK utilities such as Southern Water and Yorkshire Water have been less successful, pulling out of most overseas work and concentrating on the home market. Southern Water, taken over by Scottish Power this summer, has emphasised its commitment to achieving cost savings in a four-year £1bn investment programme in the UK. Yorkshire also decided to concentrate on winning back the trust of its domestic customers after being criticised during last year's drought.

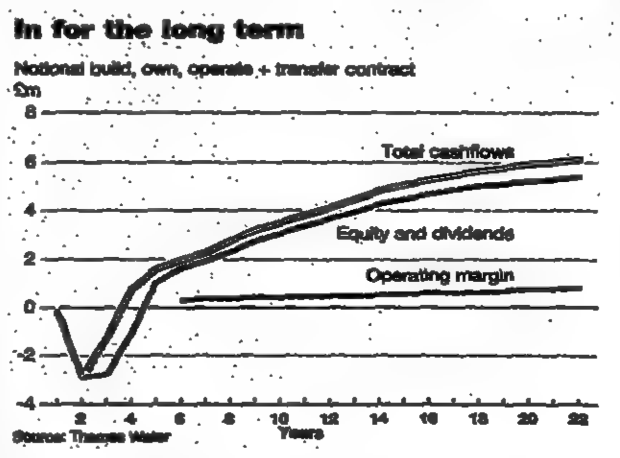
That partly reflects political pressures. Both the regulators and Labour have voiced unease at the possibility that international ventures may be subsidised by regulated domestic operations. "I am in favour of British companies operating abroad," says Mr Frank Dobson, Labour's environment spokesman. "But, in the case of utilities, that must never be at the expense of the customers to whom they are monopoly providers."

It is not surprising that UK groups look enviously at the greater freedom enjoyed by some of their foreign competitors. On a recent visit to London, Mr Gérard Mestrallet, chairman of Compagnie de Suez, a large shareholder in Belgium's Electrabel and France's Lyonnaise des Eaux, spoke enthusiastically about the value of international expansion. His company, he said, had no problem financing projects involving a profitability "J curve" – short term losses, followed by escalating long-term gains.

Embarrassed by their previous mistakes and shackled by political and regulatory uncertainty, the UK utilities have a long way to go before they can expect to hear such encouraging words from their own shareholders for foreign ventures.

Mr Lakis Athanasiou, a water analyst at UBS, believes the sector, in spite of its more careful approach to investing abroad, is unlikely to win much support from the City because possible returns are so long-term. "There is a stereotypical image of disastrous diversification, but in fact this is the most promising area for these companies at the moment."

In for the long term



COMMENT & ANALYSIS

FINANCIAL TIMES

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Wednesday November 6 1996

Throwing the rascals out

If half the allegations levelled against Ms Benazir Bhutto's administration in Pakistan are true, she richly deserved to be stripped of office. In three short years her government has stumbled from crisis to crisis, while acquiring a reputation as one of the most bent administrations this notoriously corrupt country has ever seen.

Yet President Farooq Leghari deserves only two cheers for the way he has moved against her. Through his repeated warnings about corruption and his efforts to ensure the independence of the judiciary, he has tried to enhance the constitutional role of his office as a guarantor of good government. By announcing new elections in February, he has made it clear that democracy is the only satisfactory way forward.

The snag is that three months is a long time to wait for elections when Pakistan faces dire economic difficulties. Much of its $36bn in foreign debt is short term and requires continuous refinancing. Since reserves were perilously low even before Ms Bhutto's removal, the country risks a full-scale debt crunch if its bankers now withdraw.

Confidence might have been higher if Mr Leghari had acted earlier and replaced Ms Bhutto with an interim government of technocrats, akin to that led by Mr Moeen Qureshi, the former World Bank executive, which pulled the country out of a previous crisis in 1993. As long as its mandate was limited in time, that need not, as Ms Bhutto argued it would, have been an affront to democracy.

Critical moment

Instead he dithered while Pakistan's finances deteriorated, the government's moral authority drained away and respect for the law diminished. By finally installing a weak caretaker government, he has left the country vulnerable to instability at a critical moment. This would be particularly worrying if the reason for his hesitation was a divided army. Without military support, the exercise could easily backfire. Ms Bhutto has always said that she would not go quietly.

Stability is particularly important as Indo-Pakistan relations – always a dangerous potential flashpoint – are at a particularly low ebb and regional tension has been heightened by the upheaval in neighbouring Afghanistan.

Two tasks now appear urgent. The first is to ensure that the IMF programme remains intact. It incorporates some important structural changes such as the tax on agriculture which will challenge vested interests. Banks, which have crassly lent Pakistan too much expensive short-term money, must realise that they now have more to lose than gain by pulling out. If necessary the IMF must put pressure on them to continue refinancing their loans. It would help if Mr Leghari continues to allow a central role for the able and apolitical central bank governor, Mr Muhammed Yaqub.

Political task

The second task is political. Mr Leghari's intervention has been courageous for a man appointed by Ms Bhutto herself. All sides should now co-operate to ensure that stronger political institutions can indeed produce a stronger democracy. Ms Bhutto must accept that her chance of vindication, if there is one, will come with fresh elections. The corruption allegations against her husband and others must be rigorously pursued, but transparently and without vindictiveness. New legislation to tighten public accountability should be enacted and strictly enforced.

It would be foolish to assume that Pakistan can be cleaned up quickly. All major parties are riddled with corruption, but if Mr Leghari's move is followed through, Pakistan might finally have some prospect of electing a government capable of dealing with the urgent issues of social and industrial development. Its second half-century might then promise some achievements worthy of celebration. Its people deserve something better than the abysmal record of the first.

Spending the people's taxes

UK government spending next year will be a greater proportion of national income than during the first world war. But most of it now goes on welfare rather than guns.

This was not, perhaps, the statistic which Mr John Major, the prime minister, had in mind when he said in September that there was a moral case for reducing state spending. However, it casts a curious light on the dilemma of his ministers yesterday as they struggled to control its rise for next year's budget.

Defence spending, at about £21bn this year, is one of the few programmes to offer a chance of cuts. At 3 per cent of GDP, it is now 27 per cent less in real terms than at its peak in 1984-85, but it may still be too high given the collapse of the iron curtain. However, leaving aside the arguments about maintaining a military capability, the fact is that this is no longer where the big billions are consumed. Defence represents 7 per cent of general government expenditure and, relative to the size of the economy, it has fallen by a third compared with its position in 1979.

Some further economies may be scraped from this and from other departmental budgets. But after three years of very tight expenditure controls, more cuts have been hard to find without an explicit government decision that the state should do less. In the three big spending departments – health, education and welfare, which now account for 60 per cent of the total (50 per cent in 1979) – significant cuts are impossible in an election year and difficult thereafter.

Keeping pace

For health (15 per cent of total spending), costs will continue to rise in real terms if spending is to keep pace with new treatments and the needs of an ageing population. Health spending is now 70 per cent higher in real terms than when the Tories came to power. Despite some slight easing of pressure from demography, it is unlikely that the trend will change much without a radical alteration of policy – as the demand yesterday for extra cash showed.

In education, numbers are now moving up again. Some 200,000 additional schoolchildren in three years' time could add about £500m to costs, unless class sizes are allowed to increase. When these children reach higher education, they will add further to cost pressures. So, although real education spending has risen by a mere 30 per cent since 1979, governments will be under strong pressure to curb future growth. In this decade the proportion of teenagers going to higher education has risen steeply from under 20 per cent to 30 per cent, so the presumption of free universal access, already eroded by student loans, is bound to come under further question.

Explosive growth

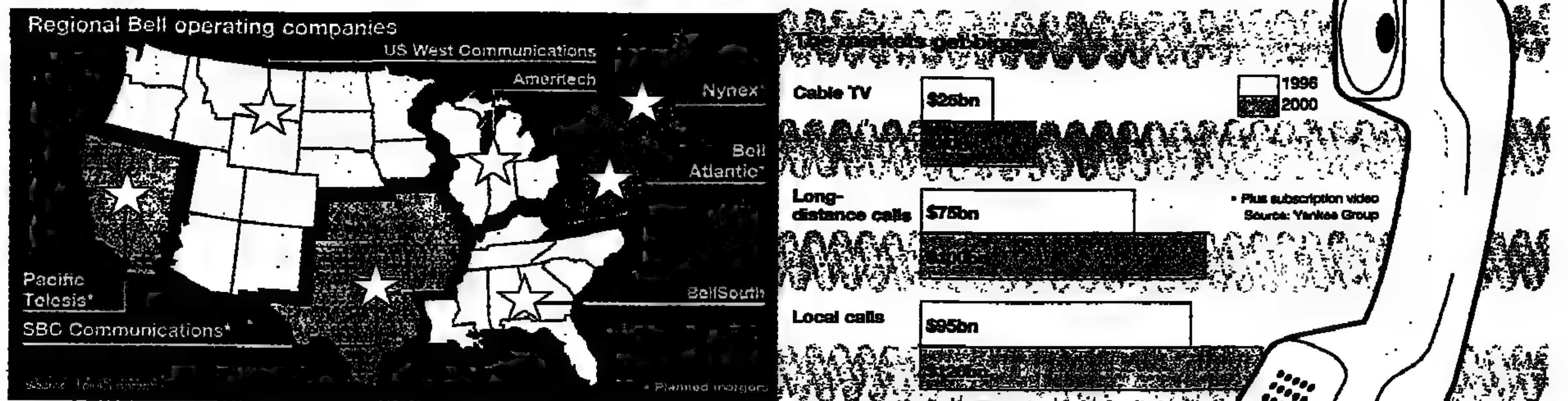
The most explosive real growth, however, has been in social security spending, up 84 per cent since 1979 and now consuming 13 per cent of national income (relatively more than *all* public expenditure in 1913). Falling unemployment is helping to curb growth, but unemployment benefits (excluding sickness and income support) account for less than 10 per cent of the total, compared with just under half for pensions. The government's measures to curb benefits and to ensure that benefits do not rise in real terms may therefore do little more than reduce the growth of these transfers.

More generally, present spending plans depend on a continued standstill in the public-sector pay bill and a damaging gap in public-sector investment, which the Private Finance Initiative can not fill.

As things stand, the government will do well simply to hold public spending steady at about 40 per cent of GDP. Even if it succeeds in that aim, it will not be able to cut taxes significantly and still reduce the deficit as it must. Tighter targets would require a radical review of state activities.

But that will be for a different Budget, and, probably, a different government.

US telecommunications: up for grabs



Local operators

	Revenues 1995 ($bn)	Change from 1994	Net income 1995 ($bn)
Ameritech	[illegible]	[illegible]	[illegible]
Bell Atlantic	[illegible]	[illegible]	[illegible]
BellSouth	17.89	6.2%	–1.23
Nynex	13.41	0.8%	–1.85
Pacific Telesis	[illegible]	[illegible]	[illegible]
SBC Communications	[illegible]	[illegible]	[illegible]
US West Communications	9.50	3.4%	1.20

Source: company reports

Top four US long-distance operators

	Global revenues 1995 ($bn)	Change from 1994	Long-distance revenues 1995 ($bn)	Change from 1994	Net income 1995 ($bn)
AT&T	79.6	6%	44.3	8%	0.14
MCI	15.3	14%	15.3	14%	0.55
Sprint	[illegible]	[illegible]	[illegible]	7%	0.40
WorldCom	[illegible]	[illegible]	[illegible]	64%	0.27

Source: IDATE

Telephone turbulence

Richard Waters asks whether the revolution in the US telecoms industry will be as profitable as the dominant operators hope

Two weeks ago, in Hartford, Connecticut, the cables that deliver television signals to many of the city's homes began to carry telephone calls as well.

Meanwhile, nearly half a million Americans have signed up with AT&T to get access to the Internet, just six months after the telecommunications giant started offering the service.

About the same number have switched their long-distance telephone service to GTE, an operator until now of local telephone networks.

Has the glorious future that has long been predicted for the US's communications industries finally arrived – a time when deregulation and technological innovation will change the way homes and businesses across the country communicate? And is this the revolution for which British Telecommunications, with its plan to buy MCI, has just enrolled?

If so, then it looks set to be a pretty turbulent period.

Tele-Communications Inc (TCI), the company behind the Hartford experiment, is stretched to the limit by the need to service its $14bn (£8.5bn) mountain of debt. The company's share price has sagged by 35 per cent this year, as its cable systems around the country have come under competitive attack from satellite and other television services.

AT&T, which until last week was the US's only contender for global leadership in telecommunications, has suffered a setback in its own core business – long-distance telephone calls. Rival carriers such as MCI, along with a rash of low-cost resellers who buy calling capacity in bulk and sell it on at discounted rates, have turned up the competitive heat this year.

In the midst of a restructuring that was meant to leave it ready for the next wave of competition, AT&T has suddenly been made to seem very flat-footed indeed. That, and a decision to appoint a little-known printing company executive as its next chairman, have contributed to a precipitate slide in its shares.

GTE has also seen its share price fall this year, as have the country's seven local telephone companies, also known as Baby Bells. Since February, when deregulation of their local monopolies was set in train by the US Telecommunications Act, the Bells' shares have lost between a fifth and a quarter of their value, while the Standard & Poor's 500 has risen 15 per cent.

This is the country that BT has chosen to enter. The hitherto separate cable-TV companies, Baby Bells and long-distance telephone carriers are about to be let loose on each others' territory, with unpredictable effects on market shares and profit margins. BT's sudden appearance on the scene has added extra spice.

Backed by BT's greater financial muscle, MCI says it will be a stronger competitor, not just for AT&T but for each of the regional Bells. It is the combination of BT's strong cashflow and MCI's well-known eagerness for a fight that has shaken the rest of the US telecommunications industry this week, and prompted a search on Wall Street for another wave of giant telecommunications mergers.

Shares in so-called competitive access providers – companies whose local networks already allow mainly higher-paying business customers to bypass their local Bell company – have jumped in recent days in anticipation of a new round of acquisitions by long-distance or even foreign carriers.

At first glance, it is far from clear that MCI needs either BT's capital or its experience of offering local telephone services to attack US local markets, especially since MCI is focusing mainly on serving business customers by building fibre-optic networks in big cities. The sneaking suspicion is that the arguments in favour of the BT-MCI deal are calculated to appeal mainly to US regulators, who have indicated that they will look favourably on any foreign investments that would bring greater competition to the US telecommunications industry.

But financial strength will be vital for any company that wants to seize large shares of the various telecommunications sectors that are being opened up. This is a matter of marketing as well as capital spending at a time when profit margins will be under pressure from increased competition.

The capital investments being made in the US communications industry at the moment are huge. The local telephone companies are spending $20bn to $25bn a year to upgrade their networks and develop new services, says Mr Dennis Saputo of Moody's, the US credit rating agency.

While a legal wrangle continues over whether local telephony should be governed by federal or state-level regulation – a dispute that could slow the introduction of competition in some states – there seems little doubt that widespread competition for local calling will begin early next year.

The cable television companies, meanwhile, are set to lift their investment to between $5bn and $6bn a year on such products as new set-top boxes and cable modems, which would enable their customers to order films on demand or use their cable service to link to the Internet.

That might be less of a drain on capital than investing in local telephone services. Speaking recently, Mr Brendan Clouston, chief executive of TCI Communications, predicted that it would cost the cable-TV company between $200 and $250 per home to upgrade its system to carry telephone signals. "Telephony is in many ways the most capital intensive [of services], and may be one of the longest pay-back investments," he said.

Then there is the mobile telephone business. Telephone companies have paid $18bn this year for licences from the federal government to run so-called Personal Communications Services networks, a lower-cost alternative to cellular. They are estimated to be spending at least as much again to build the infrastructure to carry the calls – indeed, this is the purpose for which Sprint has earmarked the $4bn it has raised by selling stakes to Deutsche Telecom and France Télécom.

However, as MCI's recent agreement to resell mobile calling services carried by a rival company demonstrates, companies do not necessarily need to own their own physical infrastructure to offer telecommunications services. Even leaving aside capital spending, developing and marketing new services can cost a huge amount of money and have a depressing affect on profits – as the mighty AT&T has proved in recent months.

The company's disappointing financial results since the spring reflect a move to put more of its money behind developing local, mobile and other services, rather than purely the long-distance business, says Mr Joseph Naccio, the head of AT&T's consumer and small business operations. "We took some risks there, and some of our product lines grew slower," he says.

Even before full-scale competition in the local and personal communications services businesses is unleashed, the effects of this are clear: AT&T's marketing and selling expenses jumped by more than a fifth in the latest quarter. An all-out battle for market share will unleash a renewed marketing extravaganza.

It will also, of course, hit profit margins. By MCI's reckoning, competition in the long-distance market has pushed profit margins on operating cashflow down to around 19 per cent. The comparable margin for local calling services is 47 per cent.

To slow the inevitable shaving of these margins, most big telecommunications companies are taking a similar approach. Called "bundling", it involves selling a broader array of services in packages – local, long-distance, cellular and paging, for instance, all bundled together on the same bill. Besides the revenue-enhancing possibilities of this approach, it may help communications companies to dispel the perception that they provide a commodity product while helping to strengthen their relationships with customers.

The average US household spends about $75 a month on local and long-distance calling and cable television, says Mr Naccio at AT&T. "We have only a small piece of this disposable income," he adds.

There is another reason for Wall Street to feel less gloomy about the prospects for US telecommunications companies: the fight for customers in the new world of US telecommunications is not a zero-sum game.

The volume of information carried on the country's communications networks is rising by 30 per cent a year, says Mr Gordon Anderson, head of the Yankee Group, a telecoms consulting firm. Even with the price-per-bit of information falling, telephone and television revenues are likely to grow by 12 per cent a year until the end of the decade.

This, for BT's shareholders, could be the strongest reason for investing $20bn in the US. Whatever happens in the international calling business, Concert, the planned BT-MCI group, would have a firm foothold in the world's biggest telecommunications market at a time when various lines of business – from Internet services to local telephone calls – are opening up.

OBSERVER

Red carpet for Li

■ Plenty of red carpets yesterday at the London Stock Exchange for Chinese vice-premier Li Lanqing, who was giving the City the once-over while the first Chinese companies prepare for a London quotation.

[illegible]

Gordon Barrass, international adviser at Coopers & Lybrand and something of an old China hand, delivered a faultless, 10-minute address in Mandarin.

Said one non-Mandarin speaker: "Couldn't understand a word. But he was very impressive."

All at sea

■ The Baltic tiger economy of Estonia has many friends and admirers, not least at the European Bank for Reconstruction and Development.

But it is making rather faster progress towards joining the European Union than previously suspected – at least according to the EBRD.

In the newly published *Transition Report* for 1996, a weighty tome giving the bank's considered view on recent developments in the post-communist world, Estonia has already joined the EU.

Or rather, part of it has. For all the maps in the 210-page book show Estonia's two islands, Hiiumaa and Saaremaa – which boast a splendid brewery and some of the best yachting in the Baltic Sea – shaded brown, like EU countries, rather than post-communist green.

The bank, which prides itself on an unparalleled knowledge of the 26 post-communist countries it deals with, blames a "printer's error". Obviously the focused, stripped-down, post-Jacques Attali bank has dispensed with proofreaders.

But at least it makes a change for Estonian officials who are more often to be heard complaining about maps which still designate their country as part of Russia.

Artless move

■ The mystery surrounding one of the more important Italian art thefts – the disappearance of Caravaggio's masterpiece *The Nativity* – has finally been cleared up.

Francesco Marino Mannoia, a leading *mafioso* now turned informer, has revealed he stole the painting from a Palermo church in 1969 on behalf of Pipo Calo, regarded as the unofficial treasurer of the Sicilian Mafia and the most refined of the bosses.

Giving evidence this week in the trial of former premier Giulio Andreotti (who is accused of links with the Mafia) he said the painting was intended for a "special" client who Calo said would "go mad over it".

He strongly hinted he believed the Caravaggio was due for Andreotti. The former premier ridiculed the idea, saying he had "never gone mad over anything, let alone a picture".

But what did seem credible about the testimony of Marino Mannoia was his admission that he and his accomplices had damaged *The Nativity* beyond repair while removing the canvas.

It has never been seen since, nor has there been a whiff of its existence on the art market.

Entry Patten

■ A poignant moment approaches for Chris Patten. The governor of Hong Kong – only recently returned from the UK after another round of meetings – flies westwards again next week for high-level talks in European capitals.

Patten will be trying to persuade French president Jacques Chirac and German chancellor Helmut Kohl that they should offer visa-free entry to holders of the new Special Administrative Region passport when Hong Kong reverts to China next year.

But during his stop-off in Bonn, Patten will also find time to address the Konrad Adenauer foundation on matters European.

It was to this audience that John Major gave his famous "heart of Europe" speech back in 1991.

And the principal author of Major's now-ignored pledge that Britain would henceforth swim in the European mainstream?

Step forward the Strauss-loving governor.

The Financial Times

100 years ago

The United States and Cuba

New York – Mr. Lee, United States Consul at Havana, arrived here this morning. He admitted that he had come to make a report to President Cleveland on the condition of affairs in the island, but he refused to be interviewed as to the nature of the representations he was about to make. "The Evening Telegram" asserts that Mr. Lee said to a friend, "It will not surprise me if I return to Havana on a warship". The accuracy of this statement is however, doubted. [Dalziel].

50 years ago

British Loan for Czechs

A decision is expected within a few days on completing the agreement whereby Great Britain may provide Czechoslovakia with a £2,500,000 credit for buying British surplus war material.

Dr. Augenthaler, head of the Economic Section of the Czechoslovak Foreign Office, said in London yesterday that the loan from Britain had been negotiated long before there was any question of the United States suspending credit facilities to Czechoslovakia. He denied that surplus stores bought under the $50,000,000 credit from the United States had been transferred to the Rumanian government.

FINANCIAL TIMES
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EU companies may face monetary union tax bill

By Gillian Tett in London

Some European companies could face unexpected tax bills after European monetary union, accountants are warning.

The tax liability may arise because the locking of exchange rates at the start of Emu, scheduled for 1999, means companies will need to revalue long-term assets and liabilities denominated in foreign currencies.

This may force some companies, particularly in Germany, to realise significant exchange-rate "gains" – potentially affecting their accounts and tax liability for 1998.

Mr John Heggarty, secretary general of the Brussels-based FEE, the federation of european accountants, said: "This is a serious issue which many companies have barely considered yet – but it is only two years away."

The federation plans to assess the scale of the problem in coming weeks. The German accountants' association has also started discussions.

Meanwhile, the European Commission will present a paper to European Union states next week calling for greater co-ordination over accountancy questions posed by Emu.

The move comes amid growing concern that Emu could lead to competitive distortions because countries are likely to treat Emu accounting issues – such as provisions made for companies' Emu-related investments – differently. Although the Commission is trying to bring European accounting standards in line with global standards, EU countries remain reluctant to harmonise their systems.

Mr Stephen Dale of Price Waterhouse in Paris said: "Bearing in mind the numbers being bandied about for the corporate Emu costs, you could get significant distortions arising from different tax treatments."

Germany is expected to be among the worst affected by potential currency changes. Although its accounting rules allow companies to make provisions against exchange-rate losses, they are not allowed to realise any gains until the loan or asset has matured.

Realising these gains could lead to a revaluation of assets and loans. For example, a 10-year loan in Italian lire – or French francs – could have changed in value against the D-Mark over the loan term.

Mr Karl Lemnitzer at KPMG in Frankfurt said: "The logic of Germany's accounting rules is that (Emu) will have valuation implications."

Some French companies might also be affected, although French accountants said large companies tend to realise exchange-rate gains more regularly. Mr Benoit Lebrun of the Paris accountancy group Salustro says: "The problem is much worse in Germany than France."

The UK, by contrast, is unlikely to be affected since British companies regularly revalue assets to take account of market movements.

Change in bond rules urged, Page 2

Pakistan troops surround Bhutto's house

By Farhan Bokhari in Islamabad

Pakistan's new government was sworn in yesterday as Ms Benazir Bhutto, the former prime minister, remained under what amounted to house arrest in Islamabad.

Mr Meiraj Khalid, the new interim prime minister, said the government's priority would be to hold "free, fair and impartial elections" on February 3.

Mr Farooq Leghari, the president, sacked Ms Bhutto early yesterday after accusing her government of corruption and misrule, ending months of growing bitterness between the two leaders.

Government troops meanwhile surrounded the prime minister's official residence where Ms Bhutto remained. She was unable to make telephone calls or receive visitors. Troops were also deployed around key government locations and airports.

Confusion continued last night over the whereabouts of Mr Asif Ali Zardari, the prime minister's husband and former investments minister. Ms Bhutto's Pakistan People's Party said he had been arrested on charges of corruption, but there was no official confirmation.

In a proclamation ousting the prime minister and dissolving the lower house of parliament, the president said government could not be carried on in accordance with the constitution, and an appeal to the electorate was necessary. He added: "Public faith in the integrity and honesty of the government has disappeared."

Mr Leghari, a former ally of Ms Bhutto, accused her government of failing to stop the killings of hundreds of people at the hands of police in the southern city of Karachi.

Pakistan's main opposition leader, Mr Nawaz Sharif, welcomed Ms Bhutto's downfall as "deliverance of the people". He was confident his Pakistan Muslim League would win the next elections. The new government also received encouragement from the IMF, which said it would continue negotiations towards a new $600m standby loan agreement. Mr Shahid Javed Burki, vice-president of the Latin American division at the World Bank, was expected to take over the finance ministry as adviser to the prime minister.

Pakistan's main stock market, the Karachi Stock Exchange, was closed for a public holiday yesterday, but businessmen expected shares to rise sharply today.

Army exercises power but shuns the reins, Page 6; Editorial Comment, Page 13

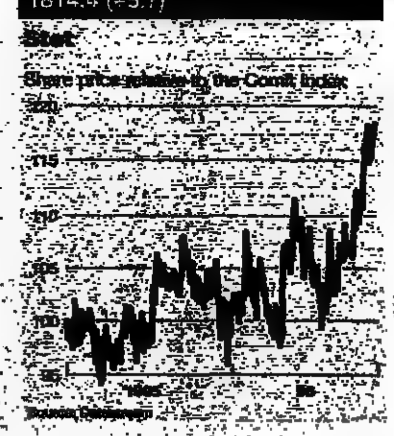
THE LEX COLUMN

Destroying Valeo

Yesterday's "French solution" to the future of car parts maker Valeo produced one winner and a lot of losers. Mr Carlo De Benedetti, who is selling his 27 per cent stake in Valeo at an 11-14 per cent premium to the market price, must be rubbing his hands. He might have got more from an industrial bidder. But none of the potential candidates, such as TRW of the US or Germany's Siemens, showed any sign of wanting to brave French political opposition.

By contrast, minority shareholders in Compagnie Générale d'Industrie et de Participations, the family controlled holding company, should be furious. CGIP is paying a hefty premium for a 20 per cent stake in a company that is heavily exposed to the dire French car market and with little scope for improvement, since it is already well-run. And because its stake does not give it control, CGIP may well have to mark it to market in its accounts – bad news for a company already trading at a 50 per cent discount to net assets. Nor does the deal do much for Valeo shareholders. The chance of a takeover premium has disappeared and the promise of bigger dividends is balanced by the prospect of future share issues. But the biggest loser is France, whose laggardly approach to shareholder value has been confirmed again.

FTSE Eurotrack 200: 1814.4 (+5.7)



Iri/Stet

Mr Romano Prodi, Italy's prime minister, has staked much of his credibility on privatising Stet, the state-controlled telecoms conglomerate, by next March. But this much-delayed share sale is likely to be postponed yet again.

With the former Communist party, a partner in Mr Prodi's coalition, opposing the sale, it is nearly impossible to pass the necessary legislation. Last week the party tabled 5,000 amendments. If the legislation is late, there is little hope of tapping international capital markets before next November because the calendar is crammed with planned privatisations for other European telecoms groups.

Postponing Stet's privatisation would not only put back the creation of an efficient Italian telecoms market but would also be a headache for Iri, the near-bankrupt state holding group which owns 63 per cent of Stet. Italy has promised the European Commission that Iri – a generous source of subsidies to state-owned Italian industry – will cut its net debt from L16,000bn ($10.5bn) to L4,500bn by June next year. But without cash from Stet, Italy seems destined to renege on its commitments once more.

Still, all is not lost. There is one way the government could simultaneously meet the Commission's deadline, create an efficient telecoms market and add a few trillion lire to Treasury coffers: by buying Stet from Iri and breaking it up.

Paying Iri the L12,000bn market value of its Stet stake would cut the group's net debt to the Commission-mandated level. But because Stet's break-up value is about 25 per cent more than its market value, the government could turn a profit of L3,000bn on the deal. That should help avoid any concern in Brussels that the state was giving Iri yet another subsidy. Dismembering Stet, essentially a holding company with high central overheads, would also make industrial sense.

Unfortunately, unbundling Stet is easier said than done. Not only have Stet's management and its political allies resisted past attempts to dismantle its empire but Iri would fight the removal of Stet from its portfolio as that would diminish its own power base.

Breaking up Iri – whose assets include the national flag-carrier, the state-run broadcaster, Italy's motorways and most of its defence and aerospace industry – would make abundant sense. If the Treasury could get direct control of Iri's assets, it might be able to hasten their privatisation and stop the steady flow of subsidies.

Not surprisingly, this is the last thing Iri has in mind. Quite the reverse. It is lobbying the government to give it three new companies – a bank, a semiconductor company and an industrial promotion agency – to help tide it over its financial problems.

Such an injection of assets would, of course, make a mockery of European Union rules banning state aid. But Brussels, which has little credibility on policing government subsidies (*vide* Crédit Lyonnais), would probably do no more than huff and puff. By contrast, dismembering both Iri and Stet would require political courage. It will be a test of Mr Prodi's government whether it has the nerve to grasp this nettle.

Lloyds Chemists

A contested bid is a wondrous process. Though Lloyds Chemists is worth less now than it was at the start of the year, both Unichem and Gehe have renewed their previous offers of around 500p a share. And given the time and money invested by both sides, they will almost certainly force each other into another increase, which could be worth an additional 20p or so.

The higher the price, the more it favours Gehe, for two reasons. First, Unichem is already at full stretch. According to analysts, if it wins at this level Unichem will make a 12-13 per cent after-tax return on its investment in Lloyds in 1998, the first full year after acquisition. That assumes, perhaps rather generously, that it will deliver more than its forecast cost savings of £20m and has no trouble disposing of Lloyds' health food and drug store chains. If those savings do not come through, or it raises its bid much higher, the return will quickly slip below Unichem's 11 per cent cost of capital and destroy shareholder value. Gehe, by contrast, has a lower cost of capital, due to its larger size and use of cheaper debt to fund its offer. It can therefore pay more and still justify the deal to its own shareholders.

Second, as the two goad each other into overpaying for their target, the clean exit offered by Gehe's all-cash offer will become more and more attractive. If Lloyds investors accept Unichem's bid, which is largely in shares, they expose themselves to the risk that the deal goes wrong. There are also longer-term worries about the direction of the stock market and the prospects for pharmacies as supermarkets pile into their market.

Lex comment on M&S and Whitbread, Page 22

Yeltsin

Continued from Page 1

Chernomyrdin spoke with some of the demonstrators gathered outside the White House, the seat of the Russian government, and pledged to pay their delayed salaries.

But the premier, who would take over for three months if Mr Yeltsin were to die or become incapacitated, appeared to play down his temporary stewardship.

Russian bond prices rallied sharply on news of the successful surgery, with prices rising by between 1.5 percentage points and 3 percentage points.

Bankers said that if Mr Yeltsin survived the post-operative period, Russia's planned eurobond launch could benefit from the perceived decrease in political risk.

Bayer talks

Continued from Page 1

the Agfa films business, were due to be posted in the fourth quarter.

In the first nine months, pre-tax profits rose 12 per cent to DM3.7bn on sales up 7.4 per cent to DM36.5bn. Most of this increase was because of acquisitions in plastics, printing plates and fragrances. Results were also boosted by favourable currency movements.

Mr Schneider reaffirmed a commitment to raising the group's operating profit margin to 15 per cent over the next four to six years. It continued to fall far short of this target, with a significant number of businesses still recording losses, he said.

Japan seeks $3bn bankruptcy of property group

By Michiyo Nakamoto in Tokyo

The Japanese government agency charged with recovering debts owed to failed housing loan companies, or *jusen*, yesterday started bankruptcy proceedings against an Osaka property developer, one of the biggest customers of the *jusen*.

The bankruptcy of Sueno Kosan will be Japan's second largest since the war and is expected to trigger the collapse of more non-bank financial institutions that lent heavily to the property group. Sueno Kosan and its affiliates have outstanding loans from the *jusen* of Y347bn ($3bn).

The Japanese government welcomed the Housing Loan Administration Corporation's action, which it believes is a necessary step to restore the credibility of Japan's financial system. This is still burdened by bad loans taken out by developers to buy overvalued property at the peak of the asset price bubble in the late 1980s.

Foreign investors will also be pleased by action to clear up those bad debts, which have not yet been made public. The leading banks have declared their bad debts, but the full exposure of the less tightly regulated non-bank institutions is not clear.

The Osaka court is expected to confirm Sueno Kosan's bankruptcy within days, and yesterday ordered its assets, along with those of two of its affiliates and its president, Mr Kenichi Sueno, to be protected from creditors.

The move comes just two weeks after the country's largest postwar bankruptcy, that of Nichiei Finance, which went under with Y991.4bn in liabilities.

Mr Wataru Kubo, finance minister, said the move was crucial for recovering loans made by the *jusen*, and reiterated that the government would not rescue troubled non-banks. The *jusen* are being bailed out with Y685bn of government money.

Sueno Kosan and its president have been accused of trying to hide assets by hiving them off to separate companies. The HLAC's move was seen as an attempt to prevent this.

However, Sueno has also borrowed heavily from non-banks and small institutions which, with the company's impending bankruptcy, are expected to be forced to declare their loans to the company unrecoverable.

This, in turn, could threaten many smaller non-banks without strong parents, according to Mr Rokuro Kuroda, an analyst at Tokyo Shoko Research, a private research organisation. He believes 20 to 30 non-banks could be affected.

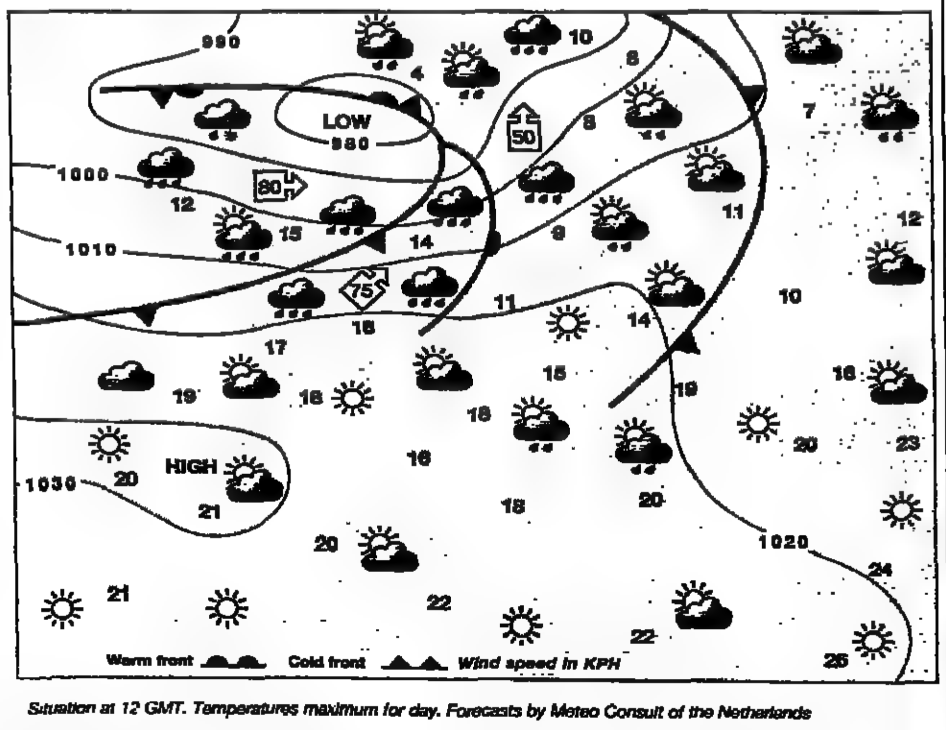
FT WEATHER GUIDE

Europe today

It will be stormy from southern Sweden to central France and from Ireland to Poland as a low pressure area moves just off southern Norway. Abundant rain and strong winds will accompany a frontal zone as it sweeps across these regions. Strong gales are expected in the warm air ahead of the front as well as over the Scottish highlands. Sunshine with afternoon temperatures between 19C and 21C will cover the Iberian peninsula and most of the Black Sea countries although the Bosporus and the Crimea will have patchy cloud.

Five-day forecast

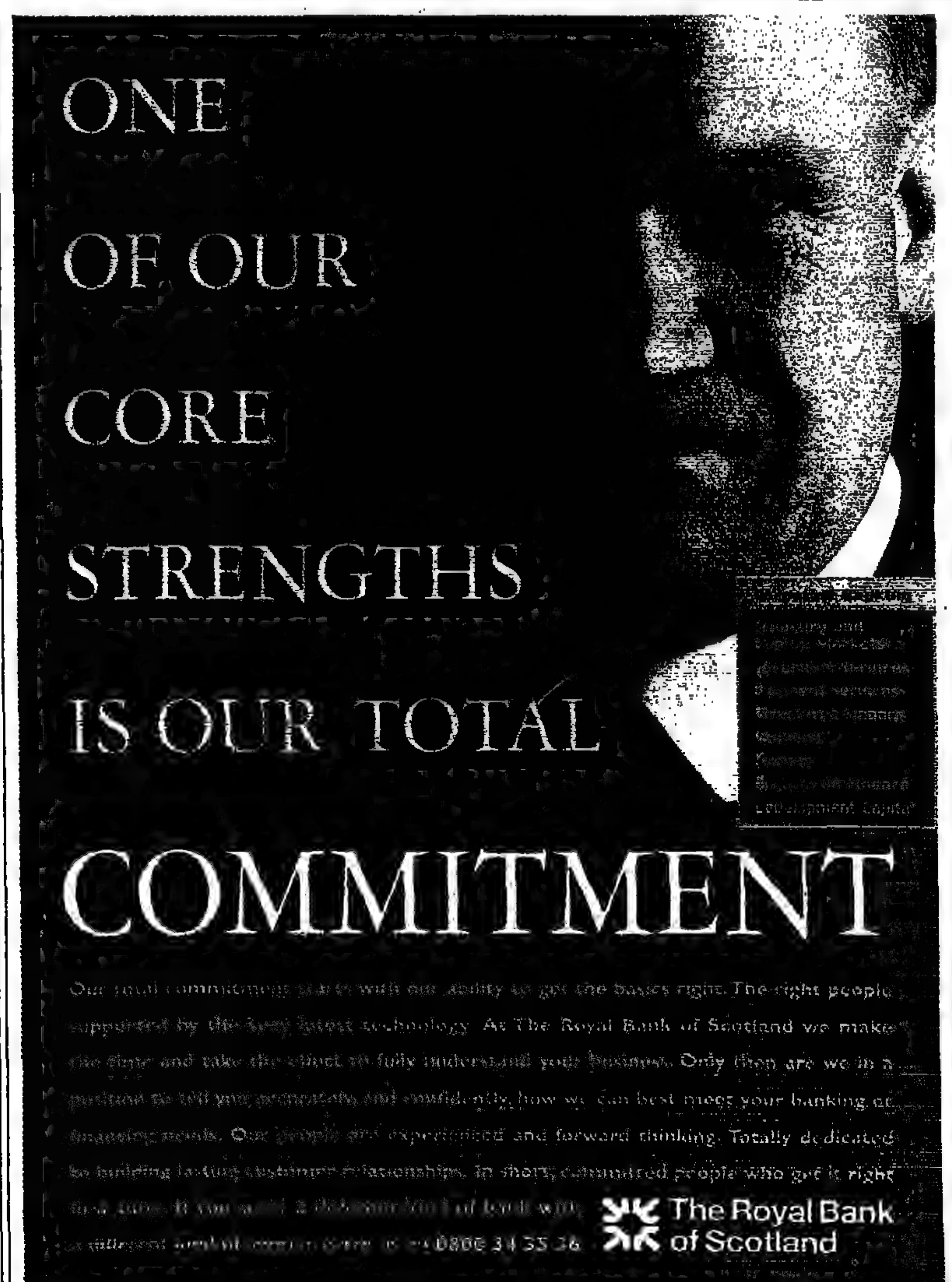
Western Europe will gradually become more settled as low pressure moves to the north-east but frequent showers mat still occur in much of the region. The Iberian Peninsula and the Black Sea area will continue sunny.



Situation at 12 GMT. Temperatures maximum for day. Forecasts by Meteo Consult of the Netherlands

TODAY'S TEMPERATURES

	Maximum Celsius										
Abu Dhabi	sun 30	Beijing	fair 10	Caracas	cloudy 32	Faro	sun 20	Madrid	sun 18	Rangoon	shower 31
Accra	shower 31	Belfast	shower 10	Cardiff	shower 14	Frankfurt	rain 15	Majorca	sun 19	Reykjavik	fair -4
Algiers	fair 20	Belgrade	fair 15	Casablanca	sun 19	Geneva	fair 15	Malta	sun 21	Rio	fair 26
Amsterdam	rain 15	Berlin	rain 12	Chicago	rain 18	Gibraltar	sun 19	Manchester	shower 12	Rome	fair 19
Athens	sun 20	Bermuda	thund 24	Cologne	rain 15	Glasgow	shower 10	Manila	thund 30	S. Frsco	fair 19
Atlanta	shower 24	Bogota	fair 20	Dakar	fair 32	Hamburg	rain 14	Melbourne	fair 18	Seoul	sun 13
B Aires	rain 21	Bombay	sun 33	Dallas	fair 25	Helsinki	rain 10	Mexico City	cloudy 25	Singapore	thund 32
B ham	shower 14	Brussels	rain 15	Delhi	sun 30	Hong Kong	fair 30	Miami	fair 29	Stockholm	rain 9
Bangkok	thund 33	Budapest	sun 13	Dubai	sun 32	Honolulu	fair 31	Milan	fair 12	Strasbourg	rain 16
Barcelona	sun 17	C.hagen	rain 11	Dublin	shower 11	Istanbul	fair 17	Montreal	rain 11	Sydney	rain 17
		Cairo	fair 23	Dubrovnik	sun 18	Jakarta	shower 32	Moscow	cloudy 5	Tangier	sun 20
		Cape Town	rain 22	Edinburgh	shower 10	Jersey	shower 15	Munich	rain 16	Tel Aviv	shower 23
						Karachi	sun 32	Nairobi	cloudy 27	Tokyo	fair 18
						Kuwait	sun 32	Naples	fair 17	Toronto	cloudy 15
						L. Angeles	sun 19	Nassau	shower 28	Vancouver	cloudy 8
						Las Palmas	fair 24	New York	cloudy 18	Venice	fair 12
						Lima	cloudy 20	Nice	sun 18	Vienna	fair 11
						Lisbon	sun 19	Nicosia	sun 23	Warsaw	cloudy 9
						London	shower 15	Oslo	rain 4	Washington	cloudy 21
						Lux.bourg	rain 11	Paris	rain 16	Wellington	cloudy 18
						Lyon	fair 16	Perth	thund 26	Winnipeg	snow 3
						Madeira	fair 22	Prague	[illegible] 13	Zurich	cloudy 16



India's Software Industry

Financial Times Review of Information Technology

SPECIAL REPORT

This second section of the November 1996 issue of the FT-IT Review examines India's increasing influence in the global software industry.

India's software export industry, worth more than $1bn a year, has become one of the most dynamic sectors of the Indian economy, fuelled by the demands of offshore clients for low-cost, high-quality products and services.

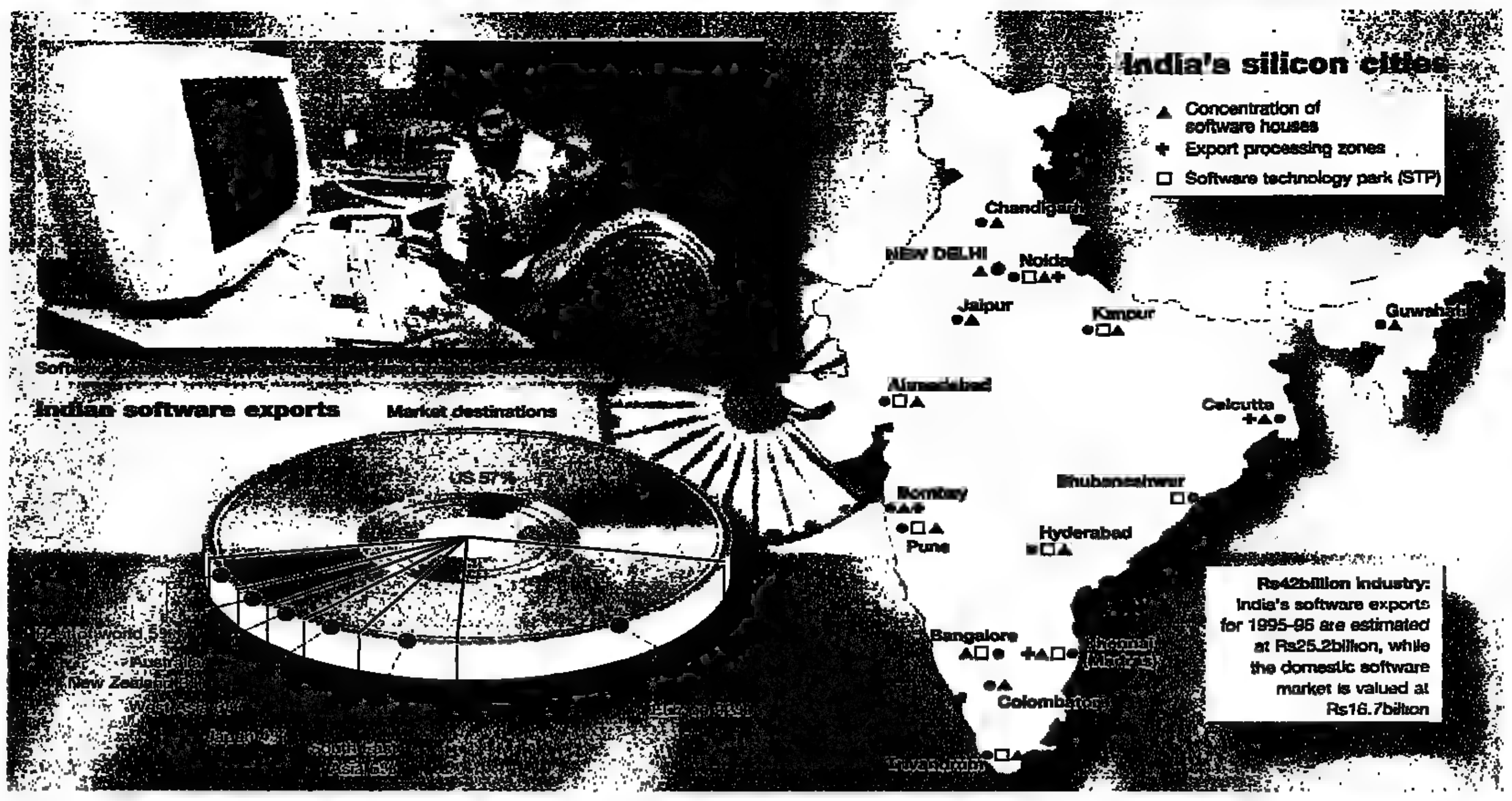
There are now more than 700 software companies in India. In the past the year, 104 companies out of the Fortune 500 outsourced their software development to India - "this clearly shows that companies can derive competitive advantage through alliances with Indian software companies," writes Mr Dewang Mehta, executive director of the National Association of Software Services, Nasscom (pictured above).

This report was written by, **Paul Taylor, IT Correspondent**

Production editor: **Michael Wiltshire**

Exports are surging ahead

India's increasingly confident software industry has a turnover of $1.2bn, reports **Paul Taylor**



In little more than a decade, India has established itself as the leading offshore software development centre for scores of western companies and a rich source for the skills required to build the information technology systems of the future.

Many Indian software companies have already forged strong partnerships with their overseas and domestic customers and proved themselves able to compete in the global $400bn software market – not just in terms of price, but on the basis of quality, innovation and technical expertise.

"Indian software companies no longer have to compete on price alone," says Mr Charles Aird, president of HCL Consulting. "We were selling a low cost product, but we don't do that any-more."

His comments reflect the growing confidence among India's software pioneers that they have overcome the credibility hurdle and can now move up the value-chain in terms of both software services and products and compete on equal terms with the best product designers, project managers and software developers in the world.

Today, Indian software companies sell their services to an expanding international customer list which now includes Japanese and South Korean clients as well as those from north America and Europe, on the basis of quality, speed, innovation and skills as well as price.

That this should have been achieved in a developing country still struggling with a wide range of infrastructure and other problems is a remarkable achievement and testament to the determination of the architects of India's software success story.

Highlighting this, the industry grew by 61 per cent in the year to March 31, posting total turnover of Rs41.9bn or $1.2bn, according to India's National Association of Software and Service Companies (Nasscom). Ten years ago, the industry was worth a mere Rs300m or $10m.

Strong overseas demand, coupled with government support and encouragement for the sector and the liberalisation of the domestic economy since 1991, helped India's software exports grow by 64 per cent to Rs25.2bn last year, while the emerging domestic sector grew by 56 per cent to Rs16.7bn.

Overall, between 1990 and 1995 the Indian industry, which comprises more than 700 companies, grew at a compound rate of 46 per cent, almost twice as fast as the US software sector, and now employs at least 140,000 people in India, including almost 100,000 software developers. The Indian software industry is also developing real depth. According to Nasscom more than 160 companies exported more than Rs10m last year and 41 exported more than Rs100m of software and services.

As Mr Dewang Mehta, Nasscom's executive director notes, "the software industry is increasingly becoming the driving force in the IT industry.

"It is ideally suited to India as it demands high skilled manpower; it has no undesirable environmental side effects; it is growing rapidly; and, unlike 'capital intensive and low skilled industries', investment in this industry is not easily displaced."

A number of factors help explain India's software success and its ability to outshine rival offshore software development centres including China, the Philippines and eastern Europe.

As Mr Niraj Somaiya, an analyst with Bombay-based HG Asia, part of the ABN Amro Hoare Govett group, notes, "India scores well above other developing countries on account of having highly skilled manpower and a tremendous improvement in the hardware and communications infrastructure which makes it highly cost effective for quality software development."

The availability of a huge pool of relatively low-cost, technically qualified software professionals, high quality levels and a time zone advantage with both Europe and the US have enabled India to exploit the rapidly expanding international market for outsourced software services including the expanding market for "remote maintenance".

Indeed, India's emergence as an important development centre in the global software industry has coincided with some fundamental changes in the way information technology is used, including the trend away from mainframe-based computing to client-server computing based on desktop personal computers and inter-networking – an area in which India, traditionally a Unix-based computing environment, has particular strengths.

While these changes have generated strong demand for skilled computer professionals from the IT industry itself, they have also spurred many end-users to re-write, convert and upgrade their existing software to take advantage of new technologies, such as graphical user interfaces and object-orientated programming.

Since the mid-1980s however, there has been a growing shortage of software engineers in the West. This, coupled with the pronounced trend towards contracting-out or "outsourcing" non-core operations among US and European corporations, has been one of the main driving forces behind the growth of the Indian industry.

"Last year saw an unprecedented global outsourcing shift towards India," says Mr Dewang Mehta, Nasscom's executive director, "During the year 104 companies out of the Fortune 500 outsourced their software development to India. This clearly shows that companies can derive competitive advantage through alliances with Indian software companies."

Equally significantly there has been a marked shift away from on-site development services or "body-shopping" where work is undertaken at the customers' site, to offshore services.

Historically many of the 700 Indian software companies have relied upon providing "body shopping" services for clients such as on-site programming. However, according to Nasscom figures, offshore services accounted for about 40 per cent of total exports last year with on-site services contributing the remaining 60 per cent. In contrast, the percentage share of offshore services in 1990 was a mere nine per cent and on-site services accounted for the vast bulk of exports.

Thus, an increasing proportion of the industry's revenues are being derived from fixed-price turnkey projects which are undertaken in India, some of which involve hundreds of hours of programming code, underscoring the industry's technical and managerial strengths. This shift reflects growing confidence among the software industry's overseas customers, many of whom begin their relationship with Indian developers by insisting on on-site work, but once they feel comfortable about the quality and skill levels, are willing to ship their work offshore – a much more cost effective option. "The industry has much more credibility these days," says Mr Mehta.

The move towards offshore work has been underpinned by two key factors. First, Indian software companies have adopted quality standards enthusiastically. Forty-one Indian companies already have ISO 9000 certification and another 60 companies are in the process of acquiring certification. "By the year end, we expect more than 80 companies to have achieved ISO 9000 certification," says Mr Mehta.

Highlighting the high quality standards that are

Continued on next page

No shortage of entrepreneurs

Continued from page 1

achievable in India, Motorola's Bangalore software facility has obtained the US Software Engineering Institute's level 5 certification and Citicorp Information Technology Industries obtained SEI level 4 certification last year.

The leading Indian software companies are also investing heavily in training, and in leading-edge programming skills such as computer-aided software engineering, fourth generation languages, object-orientated programming, graphical-user interfaces, Java programming and increasingly Internet and electronic commerce technologies.

Second, the telecommunications infrastructure in India is being improved quickly. In particular, Videsh Sanchar Nigam (VSNL), the international telecommunications carrier, has moved quickly to provide the 64Kbps data links required by software developers to link up with their international clients.

"Currently, there are more than 400 leased lines providing high-speed data communications links for offshore software development," says Mr Mehta. "In 1991 there were only three."

Among the leading companies which have outsourced software development to India are General Electric, AT&T, International Business Machines, Reebok, Caterpillar, American Airlines, British Aerospace, General Motors and Fujitsu.

In some cases, western companies have set up their own "captive" development operations in India, in others, they have formed joint ventures with Indian partners or relied on partnership deals with indigenous Indian software developers – some of which have pioneered the concept of "virtual laboratories" – development suites dedicated exclusively to a client.

Another important indicator that the Indian software industry is maturing is that more research and development and software design is being done in India.

Among the multinational companies which have Indian operations, serving as software engineering and production centres for their worldwide operations, are Citicorp, ComputerVision, Verifone and Texas Instruments.

Recent additions have included Oracle, the database specialist, Novell, Motorola and Siemens all of which have established large and rapidly-growing software engineering subsidiaries in Bangalore, India's "Silicon plateau".

Similarly, a growing number of the top-tier domestic Indian software developers are beginning to invest in R&D and the development of their own software packages and services. A handful of Indian companies including Tata Consultancy Services, Infosys, Ramco and Mastek have already developed successful software packages - mostly for the domestic market - and others including BFL in Bangalore are taking the first steps towards developing their own shrink-wrapped products.

> India has the second largest English-speaking scientific manpower pool after the United States

Significantly this higher risk and more costly development work is being undertaken at a time when the Indian industry appears to be on the threshold of a "Year 2000" or "Millennium bomb" bonanza.

Indian software companies, with their proven expertise in software maintenance, migration and re-engineering, are ideally placed to benefit from the billions of dollars of work which industry experts predict will flow from the need to rework much older software to deal with the millennium date change. Already many Indian companies have signed partnership deals with western computer services groups and some have already undertaken Year 2000 pilot programmes.

India certainly has no shortage of software entrepreneurs and innovators – after all, one of the country's key competitive advantage has been the sheer size, technical competence and relatively low cost of its manpower base.

India has the second largest English-speaking scientific manpower pool after the US, and a sophisticated higher education system producing a steady stream of highly qualified graduates.

This pool of high-powered but low-cost manpower has helped underpin the rapid growth of the industry – and particularly exports. But most analysts agree that low costs are unlikely to provide a sustainable competitive advantage.

Nevertheless, despite salary increases averaging perhaps 25 per cent over the past 12 months, India is still very cost-competitive.

"We see the advantages of India's cheap labour being sustainable for at least five more years," said Marlin Partners in an analysis of the Indian industry, published earlier this year.

In the longer term, analysts argue that India's competitive advantages will come from ensuring productivity and quality. However, the Indian industry also has other hurdles to negotiate if it is to reach its full potential.

In particular, infrastructure problems, particularly extended daily power cuts and water shortages in software centres such as Bangalore, threaten to stall or curtail the industry's growth.

Nevertheless, most of the indicators are positive. The country's already a force to be reckoned with in the world software market, although, as Mr Ashank Desai, Nasscom's president notes, "we still have miles to go. The international opportunities as well as the potential in the domestic market are huge."

By the end of the decade, the association is predicting that the industry's revenues will reach $5bn. By then, India may have even produced its own Bill Gates and Microsoft.

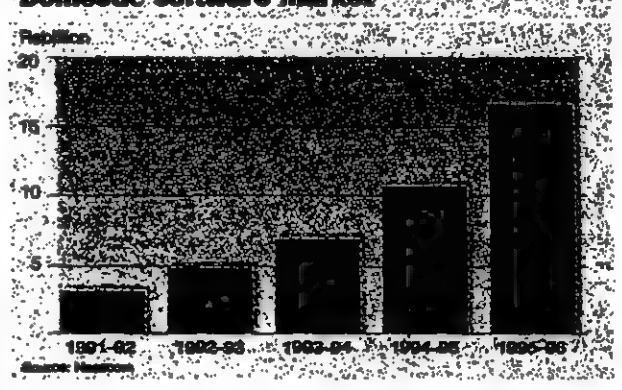
☐ Exporters' innovation: Indian Software Pavilion in London this month: see details, page 5
☐ Case studies, page 6

■ The domestic Indian software market

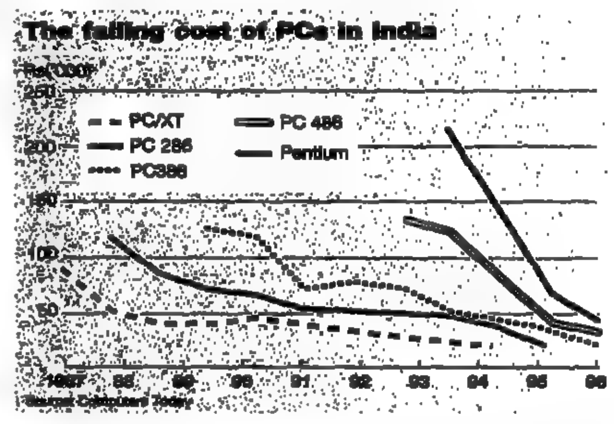
The sales potential is vast

Prospects for India's lively market has the attention of international IT giants

Domestic software market



The falling cost of PCs in India



The domestic Indian software market has grown used to living in the shadow of the dynamic export sector, despite notching up a very respectable compound growth rate of more than 38 per cent between 1990 and 1995.

However, there are now signs that the tide could be turning as Indian industry and commerce begin to invest heavily in information technology to ensure that they can compete in the liberalised domestic market and overseas.

Two years ago, the growth rate in the domestic market exceeded export growth for the first time and last year domestic software sales grew by 57 per cent, only just behind the spectacular 64 per cent gain posted by exports.

According to National Association of Software and Services Companies figures, domestic software sales – excluding software developed in-house – increased to Rs16.7bn in 1995/96 from Rs10.7bn the year before.

"One of the major reasons for increase in demand in domestic market has been the increasing maturity of end-user organisations as well as initiatives taken by Nasscom and Department of Electronics in curbing soft ware piracy," says Mr Ashank Desai, Nasscom's president. But there are also a number of other reasons behind the recent surge in domestic software sales, including a sharp reduction in import duties on software down to a uniform 10 per cent.

Coupled with rapidly growing personal sales, computer penetration – albeit from a low base – and a marked shift towards packaged software, these factors have produced a surge of interest in the domestic market and a boom in IT training for companies like NIIT and Aptech.

Multinationals

The growth and enormous potential of the domestic IT market has already caught the attention of companies like Microsoft, the world's largest software company, which has built up a nationwide network of dealerships to sell its products and is undertaking a wide range of "market development" activities.

Other multinationals targeting the growing Indian domestic market include Novell, Oracle and SAP, the German manufacturing resource planning specialist which has formed a highly successful partnership with Siemens Information Systems, part of the Siemens group. "Virtually all the large multinationals in India are customers for SAP's R/3 package," says Mr P Venkatram, general manager of SIS.

Prominent local companies in the Indian market include Tata Consultancy Services, Wipro, CMC, Onward Novell, Sonata, Tata Unisys, Rolta and Mastek.

While services and turnkey projects still account for a large proportion of the overall domestic IT market, packed software is claiming a growing share. Sales of packages totalled about Rs73m, or around 45 per cent of the overall market.

Among the fastest growing market segments are the manufacturing, financial services and government fields. Sales of relational database management systems increased by 50 per cent, sales of financial accounting packages doubled and networking product sales grew by 90 per cent.

Overall, Nasscom reckons 122 new software packages were launched by overseas companies last year – producing a bonanza for big resellers like Bangalore-based Wipro. However, domestic packaged software vendors have also performed well. According to Nasscom, 104 new products from indigenous software suppliers were launched last year. The leading domestic packaged software developers include Infosys whose rapidly expanding product portfolio includes the Nancs 2000 banking package and D-Maps, a distributed mapping packages which has also been sold successfully abroad.

Competition

"Our biggest challenge today is how to recruit, train and retain the best and the brightest software professionals because there is tremendous competition for manpower," says Mr N.R. Narayana Murthy, Infosys' chairman and managing director.

While he believes Indian software companies are unlikely to be able to compete against western companies such as Microsoft in the shrink-wrapped software market, which is largely a marketing game, he also thinks they can be effective in large niche markets.

Other successful indigenous software package developers include Bombay-based Mastek whose products include the Mamis enterprise resource planning package together with life insurance and securities industry offerings, and Madras-based Ramco whose ERP package has won critical acclaim and competes head-to-head with SAP.

Companies like Infosys, Mastek, Ramco and others have proved that domestic Indian software developers can build innovative, leading-edge business software packages and their success is likely to encourage others to follow.

Today there are about 390 active companies in the domestic software market compared with just 10 five years ago. While their recent growth has been impressive, the potential remains enormous. Foreign and domestic software vendors have barely begun to scratch the surface of a huge industrial, commercial and retail market which appears poised to explode.

■ Software exports • India's total software revenues could reach $5bn by the year 2000 – exports now hold the biggest share

Strength grows in technical skills

More than 140,000 technicians in India work on contracts for overseas clients, offering advantages in cost-savings and quality of software

India's software export industry has become one of the most dynamic sectors of the Indian economy, fuelled by the demands of offshore clients for low-cost, high-quality products and services.

"Low manpower costs, a successful track record and easier global reach are driving India's software exports, which have grown some 50 per cent annually over the last five years and are expected to maintain the momentum," says Mr Aditya Srinath, an industry analyst with Bombay-based brokers SS Kantilal Ishwarlal Securities.

A few years ago, the World Bank study compared India with a sample of seven competing countries including Ireland, Israel, Singapore, Philippines, China, Hungary and Mexico. When companies were asked to rate their preference for providing software and services, India came top of the list.

Among the reasons cited by clients were the cost and quality advantage of the Indian industry. India's strong technical skills, particularly in leading edge technologies, and infrastructure considerations such as data communications links and the establishment of Software Technology Parks.

India's other attractions as a software development centre for multinationals include income tax exemptions and other government-sponsored incentives for exporters, the full convertibility of the rupee and the growth of the domestic market fuelled by economic liberalisation.

Typically software exports for a developing country like India move through at least three distinct phases:

- Exporting cheap labour overseas or "body shopping". This enables companies to build credibility with potential clients, and while margins in exporting cheap programmers may be low by international standards, low manpower costs mean that Indian exporters can still achieve healthy profits.
- Using cheap labour to provide offshore services in the home country. This type of contract or project-based work eliminates costly travel and helps build the local infrastructure.

Some companies have established "software factories" or units dedicated exclusively to a single client. These high security units ensure confidentiality for *long term partners and operate* as extensions to in-house development teams. Satellite communications remove distance as an obstacle to doing business.

- Building packaged software products for export overseas. This is the highest margin business in the global software industry and longer term goal of many companies. However, this business requires more initial investment and is much more risky than contract work. Successful products require good market understanding and hefty marketing *expenses which often* negate any salary advantages.

Today, most Indian software exporters are still undertaking contract work – this is the "bread and butter" of the industry, but most are expanding their offshore work and some have begun to produce niche products for the global market.

Significantly, the proportion of work undertaken for customers offshore rather than on-site is growing rapidly, reflecting the growing confidence of big multinationals in the ability of Indian software companies to deliver high quality products and services on time. Offshore software development work now accounts for about 40 per cent of the total compared with less than 10 per cent at the start of the decade.

Instead of being limited to supplying basic data entry and "code-bashing" services, Indian companies are also undertaking more challenging work for their *overseas* clients or parents.

In some cases, they are designing, building and supporting *products on a global* basis. According to the Nasscom – excluding one-man operations – there are more than 360 significant participants involved in software exports. Together, they employ about 140,000 technical people but vary dramatically in size and in structure.

While the Indian industry continues to expand, a clear "first division" tier is emerging, however. A significant indication of this trend is that the top 25 exporters *now account for 73 per cent* of overall export revenues.

Among the leading companies identified by Nasscom are Tata Consultancy Services which helped to shape this industry in its early years, the fast growing HCL group which is aiming to become India's first IT multinational, Wipro, Pentafour *Software*, the recently restructured Tata Unisys (in which Unisys has sold its 50 per cent stake to the Tata group), Silverline Industries, Infosys Technologies, Fujitsu-ICIM, Square-D Software, Patni Computer Systems and Satyam Computers.

Some, such as TCS, the established leader in the Indian software industry, are indigenous companies, while others – such as BaeHAL, *HCL Hewlett-Packard, and* Tata Information Systems – a joint venture between Tata and IBM – are joint ventures between domestic enterprises and western companies.

A third group which comprises companies such as Citicorp Information Technology Industries, Texas Instruments, Motorola and Siemens Information Systems – and most of the more recently established software exporters – are wholly-owned subsidiaries of multinationals, and they use their Indian bases as software sourcing and production centres.

Among this last group, a growing number of the leaders of the global IT industry including TI, Motorola, Ora*cle and Novell have est*ablished research and development centres in India which are responsible for products or *services on a worldwide* basis. For example, Texas Instrument's Bangalore facility is designing complex semiconductor devices for the US electronics group.

Novell's fast-expanding Indian development centre specialises in three key areas, network services for Unix, network file systems and storage management services for the US group.

"We have worldwide responsibility for these areas and operate as a logical extension of product teams in the US," says Mr Vikram Shah, managing director.

*Western computer soft*ware and services companies like Origin, a Philips subsidiary, have established a rapidly growing presence in India to help service both domestic and international clients, and at the same time others have signed software licensing deals with Indian companies.

Other companies like Britain's Logica are building close partnerships with Indian companies. Logica has teamed up with HCL-Consulting for mainframe migration work and with Synectics, an innovative Bangalore-based start up which has developed a next-generation banking product called Quaestor which has recently been sold to Arab Bank, the largest bank in Jordan and one of the main financial institutions in the Middle East with more than 300 branches.

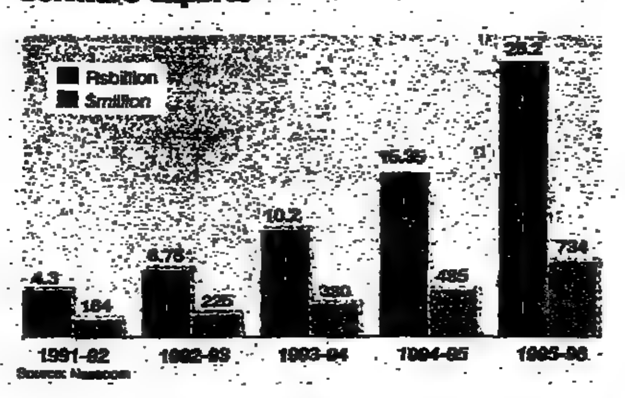
Meanwhile, some indigenous Indian companies like Bangalore-based BFL Software – recently appointed Compaq Computer's "Partner of the Year" – have developed shrink-wrapped software packages which are then re-badged and sold by their overseas clients.

The success of this sector is reflected in the annual figures which Nasscom has prepared. According to the association, the Indian software export industry grossed revenues of Rs25.2bn last year, up from Rs15.35bn in 1994/95.

Equally importantly, the industry has become an important foreign exchange earner. Last year the soft-

Continued on next page

Software exports



Source: Nasscom

India's top software exporters

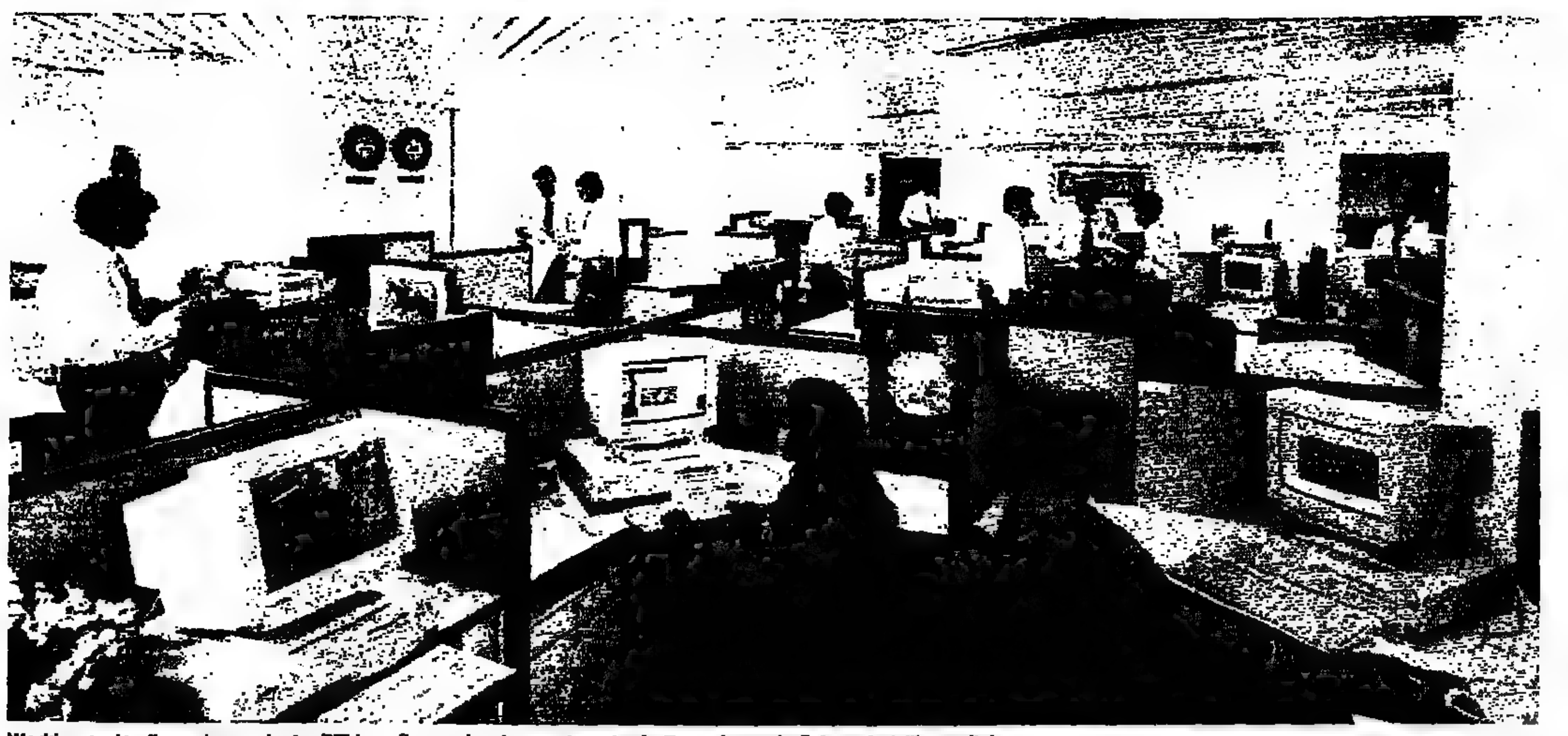
		Revenue Rs m			Growth
		1993-94	1994-95	1995-96	%
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
2	HCL Corporation Ltd			2700.0	–
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
4	Pentafour Software & Exports Ltd	282.9	552.6	1020.3	84.0
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
6	Silverline Industries Ltd	300.0	–	814.9	–
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
8	Fujitsu ICIM Ltd	322.5	–	640.0	–
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
10	Patni Computer Systems (P) Ltd	[illegible]	–	560.0	–
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
12	Information Management Resources (I) Pvt Ltd	[illegible]	320.0	439.4	37.0
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
14	Mahindra-BT Ltd	[illegible]	242.1	386.3	58.3
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
16	Larsen & Toubro Ltd	[illegible]	200.0	365.9	82.0
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
18	Digital Equipment (India) Ltd	[illegible]	438.9	357.0	-18.6
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
20	IIS Infotech Ltd	[illegible]	229.0	329.0	43.0
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
22	Citicorp Information Technology Industries Ltd	144.6	[illegible]	310.6	76.0
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
24	CMC Ltd	[illegible]	142.1	271.2	90.0
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
26	Hughes Software Systems Pvt Ltd	[illegible]	–	254.0	–
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
28	BFL Software Ltd		–	199.1	–
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
30	RS Software (India) Pvt Ltd	[illegible]	114.5	183.1	59.9

Source: Nasscom & Computers Today [illegible]

IT multinationals in India

		Revenue Rs m	Partners/tie-ups in India
1	HP	5,780	HCL, HP, HP India, ECR, Godrej, HPISO, PCL, I&T, CMS, Zenith, Redington
2	IBM	3,560	TISL, Zenith, CMS, ITC, Nexus, Microland, ECIL, Sonata
3	ACER	3,200	Wipro-Acer
4	INTEL	2,700	Microland, HCL, HP, Godrej
5	Digital	2,590	DEIL
6	Compaq	2,000	Microland, Unicorp, FIL, Tangerine, Minicomp, CMC, Crompton Greaves
7	Sun	1,700	Wipro, RIL
8	Microsoft	1,120	TUL, Sonata, Godrej, Datapro
9	Apple	1,100	Wipro, unicorp, Odin, Tangerine
10	Citizen	810	TVSE
11	Silicon Graphics	750	Tata Elxsi, DCM DS
12	Dell	659	PCL, ESPL, Rolta
13	Novell	640	Onward Novell
14	AST	639	PCS, AMD, Tangerine
15	Olivetti	548	Modi Olivetti
16	Oracle	528	TCS, Hexaware
17	Epson	[illegible]	Wipro
18	Motorola	500	Motorola ISG
19	Tulip	400	Tulip India
20	Texas Instruments	375	Texas Instruments India
21	Bay Networks	360	Ramco, Microland TUL, HCL Comnet Unicorp, Datacraft ICIM
22	Intergraph	348	Rolta
23	Unisys	307	TUL
24	Cisco	270	Wipro Microland, Digital, Datacraft, ICIM
25	Autodesk	250	HOPE, Neil Automation
26	3Com	250	Maistar, HCL Comnet, PCL, Modi Olivetti, Godrej
27	Panasonic	191	Godrej
28	Sybase	180	NIIT
29	UB Networks	175	Wipro, Advantec
30	Tandem	172	Wipro
31	SDRC	127	Total Ebd, Onward
32	Verifone	103	Verifone India
33	Multi Tech	95.5	Multi Tech India
34	Informix	94.5	Silverline
35	Cadence	81.1	Cadence India, Wipro
36	PTC	65.5	PTC India
37	Cylink	65.0	Makaster
38	Ingres	53.0	Mastek
39	QAD	24.5	–
40	Integrated Systems	18.6	–

Source: Dataquest Magazine, India



Working on leading-edge projects: BFL's software development centre in Bangalore – India's main 'silicon city'

■ Tata Consultancy Services • New partnership with Microsoft

Strategic alliance

Eight weeks ago, Microsoft, the world's largest software company, announced a new strategic alliance with Tata Consultancy Services under which the Bombay-based group will provide software development, consultancy and value-added services for Microsoft's Windows NT operating system and its BackOffice software.

The partnership – the latest in a string of alliances with international partners – is a tribute to TCS, India's largest software company and the one which perhaps more than any other, has helped establish India's reputation for quality software development and services.

The group, which was founded in 1969, reported pre-tax profits of Rs1.29m in the year to March 31 compared with Rs1.01bn the previous year, on revenues which increased to Rs5.2bn from Rs3.52bn.

What TCS' founders realised long before most others in India, was that technology was going to determine the way government and business functioned. "It was very simple, it was not complicated at all," says Mr Faqir Kohli, TCS deputy chairman, a modest man who began using IBM computers in 1961 when he was at the Tata group and is now often referred to as being the 'father' of the Indian software industry.

Since then, TCS has grown to employ more than 6,200 software professionals and has probably trained more than 10,000 others, many of whom now run other Indian software companies.

From the outset, TCS recognised that its future lay in software and IT consultancy services, but it needed to acquire technology skills if it was to deliver software products and services to the domestic market. "That is where our venture in exports started," says Mr Kohli.

One of the group's first domestic projects was in banking. "We worked with a bank and discovered they were in arrears by months and years, we cut the areas to about two or three weeks, we couldn't reduce the arrears any further because the entries were still coming by the post, there was no networking then."

Subsequently TCS installed the system in 49 banks in India, "we learned about re-usability long before anyone else."

The first overseas work that TCS did was for Burroughs, taking a hospital management system and converting it from one platform to another. "It was worth $35,000, but we didn't have a Burroughs machine, so we wrote the code for an ICL machine and then developed a filter from ICL to Burroughs."

Ever since then, TCS has prided itself on being one step ahead of its rivals with new technologies – for example, it is investing heavily in Internet technologies.

Mr Kohli insists that the focus of the group will remain software. Currently exports account for just over 80 per cent of revenues and grew at 48 per cent last year to Rs4.2bn while domestic earnings grew by 88 per cent to Rs939m. Over half the export revenues come from onsite projects, and the US market accounts for about 50 percent of total exports.

TCS is also strong in the packaged software segment, both as a distributor for Oracle, Avalon, Lotus, Unigraphics, and SAS and with its own products including E.X. RTwo, Success Plannedl, and ISBS, a banking package now installed at 500 sites.

The group has recently signed a licensing agreement with Britain's Business Objects group which plans to sell a new banking package developed by TCS in the international markets.

The Indian group has also renewed its partnership with IBM's Lotus unit for Notes implementation.

■ BFL Software

An accolade-winner

BFL Software may be one of India's youngest software start-ups having been founded in 1993, but it is also one of the fastest-growing and most dynamic and last month won an accolade from Compaq Computer, one of its main offshore clients.

The quoted company, part of the Calcutta-based Bangur Foundation, has two development centers in Bangalore, India's Silicon City (a single campus called BFL Township is under construction 20 kilometers outside the city), and overseas offices in the US and Singapore. Last year the group, which now employs over 410 software professionals and 40 managers, reported turnover of $7m, a figure expected to grow to $13.5m in the current year.

BFL's employees are divided into six technology groups, the systems group which specialises in operating systems utilities, device drivers and test suite development; the networking group; the re-engineering group which provides downsizing services, migration services and Year 2000 solution; the database and client/server group; the Tandem group and a new unit called the current and emerging technologies group which handles Windows projects, object orientated design and programming, multimedia and Internet hosted applications.

Among the group's main customers are Astra, the Swedish pharmaceuticals group, the Central bank of Nigeria, and Comshare. BFL has also set up a dedicated development centre for FedEx Logistics, built a video-conferencing system for Hyundai Electronics of Korea, and developed PC software packages for Microhelp the US-based PC software group whose products include 'Zip It.'

BFL is considering alternative strategies for developing its own shrink-wrapped products business – perhaps in conjunction with marketing partners. "As a first step we have signed an agreement with Microhelp to market their products in India," says Mr B V Venkatesh, president and chief executive.

The group's relationship with Compaq began two and a half years ago when BFL set up a dedicated unit for the world's largest PC manufacturer staffed by 70 software engineers – there are another 15 BFL employees in Compaq's Houston headquarters.

Among the services provided for Compaq, BFL maintains the US computer group's World Wide Web site in Java and has been asked to develop Internet software for the company. "These are leading-edge projects and give a great deal of satisfaction to software developers," notes Mr B G Balakrishna, head of the group's international operations. Reflecting this BFL has an attrition rate of around 12 per cent – about half the industry average.

The group has also set up a special unit to deal with Year 2000 projects and completed three pilot projects for three US-based Year 2000 customers in the financial services sector. In total, the group has undertaken more than 75 projects in 10 countries over the past three years and intends to continue to grow, albeit at a manageable pace.

■ HCL

India's largest IT organisation

Shiv Nadar, HCL's charismatic chairman, has set his sights on turning the group he helped found in 1976 into India's first information technology multinational by the end of the decade.

Already, HCL ranks as India's largest IT group with revenues of $500m in the latest financial year, several publicly traded subsidiaries – most of which are market leaders in their fields – and a string of important international joint ventures and partnerships.

Nadar, now aged 50, epitomises India's new bread of IT entrepreneurs. He moved to Delhi from his native Tamil Nadu in 1968 to work as an electrical engineer for DCM, an Indian conglomerate, where he rose to become marketing manager of the data products division.

Hindustan Computers Ltd was set up by Nadar and five colleagues to manufacture office products such as copiers. Since then, however, the group has mushroomed into a broad-based IT conglomerate with global ambitions.

Shiv Nadar, HCL's chairman, epitomises India's new bread of IT entrepreneurs. HCL Hewlett-Packard employs over 7,500 people

Among HCL's main businesses are the flagship HCL Hewlett-Packard company and HCL Frontline, market leaders in India's fast growing computer hardware business, NIIT, one of the country's leading IT training companies, and HCL Consulting which undertakes on-site and offshore software development projects for customers around the globe and ranks as a top-ten software exporter in its own right.

Aside from running more than 150 training centres across India, NIIT also develops and sells educational programmes in the US and elsewhere and develops software for overseas clients including Sun Microsystems, Sears, Robebuck & Co and IBM.

Overall, about 77 per cent of the group's revenues come from computers and software – its hardware offerings range from high powered servers down to its Busy Bee range of home personal computers, priced from just Rs 20,000.

HCL Hewlett-Packard, a joint venture formed in the early 1990s after the Indian government began the economic liberalisation programme, has grown rapidly into the India's premier IT organisation and the group, which employs more than 7,500 people – more than half in software and customer-services engineering – has also been broadening its product portfolio and geographic reach through a series of recently announced joint ventures with General Instrument in cable TV equipment; Deluxe, a leader in the US integrated payment systems market; James Martin for Year 2000 solutions; and Perot Systems in computer services and outsourcing, which will focus on opportunities in the Asia Pacific region.

"There are a myriad business opportunities in the IT area in the Asia Pacific region," says Mr Nadar.

"We expect continued growth and modernisation in finance and banking, utilities, energy, telecommunications, transportation, healthcare and manufacturing."

Other allies include Microsoft and Britain's Logica which HCL-Consulting has teamed up with to provide migration services.

Outside India, the group has an established presence in 15 countries. "We realised early on that we needed to globalise the business," says Mr Nidar.

Will Mr Nadar and HCL realise their objectives? Most analysts have no doubts that they will. As HCL's chairman notes: "There is a kind of aggressiveness that runs through HCL."

■ Software exports • A key earner of foreign exchange in India's economy

A highly diverse sector

Continued from page 3

ware export industry brought in foreign exchange earnings of $734m and, as Mr Dewang Mehta, executive director of Nasscom, notes, "has emerged as one of the highest net foreign exchange earners in the Indian economy".

Indigenous Indian companies, led by industry veterans such as TCS, IIS Infotech and PCL Mindware, are also expanding their international presence, setting up offices in the US, Britain, continental Europe and now in Asia and the Far East – for example Square D has set up a Japanese sales office and has a team of Japanese speakers in its Madras facilities dedicated to translating project work.

While the main objective of these overseas offices is to win new business and build relationships with offshore clients, at least one Indian company, ION Information Technologies, has taken a different approach setting up a team of project managers and software engineers in the Thames valley, "to ensure project management and control is retained in the UK to reflect customer demand".

The Indian software export industry is also extremely diverse – in terms of size, skill-sets and geography. Last year, more than 160 companies exported over Rs10m of software compared, with just 14 companies in this category five years ago.

Similarly, the number of Indian companies with high-speed 64Kbps satellite datacommunication links – a key requirement for undertaking volume offshore work – has mushroomed from just five companies, four years ago, to more than 250 today.

As Mr Iain Allison of Bombay-based Marlin Partners noted in a recent report on the sector: "American corporates have been the main employers of this industry and have been highly influential in determining its shape and the nature of its services.

Communications

"Improvements in the telecom infrastructure have meant that the United States and other developed markets are on India's doorstep and not on the other side of the globe. No other Indian industry has these factors favouring it."

In terms of markets, the US continues to top the list. According to Nasscom, India exported software worth Rs14.5bn to the US last year. In other words, software exports to the US grew by almost 60 per cent.

"This quantum of software exports to the US was possible due to successful lobbying efforts by Nasscom in partially solving visa and related issues," claims Mr Mehta.

But while US companies have been in the vanguard in terms of exploiting the software development opportunities that India presents, European and Japanese companies are beginning to realise that outsourcing to India can help them maintain their competitive edge, accelerate time to market and reduce costs.

Among the recent new entrants, UK-based financial services groups are showing particular interest in India. For example, Churchill Insurance, one of the UK's leading direct motor and home insurers, established a software development subsidiary in India earlier this year. The new unit will undertake software development work in an Oracle / Unix environment, and provide consultancy services to its parent and other group companies in the specialist fields of very large databases, performance tuning, hardware sizing and configuration.

Nasscom has recently launched Phase II of Project Niesa (Nasscom's India-Europe Software Alliance) to establish joint ventures and strategic alliances between companies in India and the European Union. Within 15 months of the launch of the initial phase, 11 joint ventures between Indian and European companies were set up. Looking ahead, most analysts believe the prospects for India's software exporters remain good. With relatively low software development costs and 100 per cent income tax exemption on software exports, the sector has also been very profitable so far.

Both operating margins and return on capital employed have averaged about 30 per cent across the sector, according to SSKI Securities, making the sector's leaders attractive investments.

Nevertheless, there is a growing acceptance that although India's cost advantages will reduce over time. For this reason, most Indian software exporters are looking to move further up the value chain.

Profit margins

The current export mix has been likened to a commodity business – standardised software packages, the most profitable segment of the software market, only account for 10 per cent of Indian software exports.

"With increased competition and higher costs, margins will fall over time," says of Mr Srinath of SSKI Securities. To offset this, he – like most analysts – believes Indian companies will need to develop products to sustain growth in the long term.

■ The Year 2000 problem • Providing solutions could prove to be a bonanza for India's software industry

Spectre of the millennium

Fortunes await the software companies with the resources available to deal with the so-called 'millennium bomb'

The "Year 2000 problem" or the "Millennium Bomb" threatens to disrupt information technology systems throughout the world – systems based on two-digit date fields and unable to deal with the date change on January 1 2000 – unless huge sums are spent to correct the problem.

Researchers at the Gartner Group have estimated that it could cost an astonishing $600bn to address the millennium problem, but time, or rather the lack of it, could pose an even greater challenge. What is more, the human resources needed to quantify, plan and execute software changes are already in short supply.

Gartner has estimated that 90 per cent of business applications, if not corrected will fail by 1999 and 20 per cent, comprising applications such as long term sureties or insurance policies, are already at risk.

For Indian software companies, rich in relatively low cost skilled manpower and with a proven track record in software migration and re-engineering, the millennium problem could prove to be a bonanza.

Already most of the leading offshore software development companies have set up dedicated Year 2000 units and some have signed partnership deals with US and European tool vendors, computer services organisations and consultancies.

Resources

"Some external service providers are moving ahead to further relationships with various offshore software vendors, particularly in India, to ensure they have the resources to put against this issue," noted Gartner analysts in a report published in July. "The recently announced joint venture between HCL and James Martin is one such example."

"The millennium bug means tremendous opportunities for Indian software companies," says Mr Dewang Mehta, executive director of the National Association of Software and Services Companies. "Many Indian companies have already taken this challenge and see it as a major opportunity and have specialised in providing solutions, not only through products, but also through customised software development capabilities."

Nasscom believes Indian software companies could harvest at least $5bn of millennium work and has formed a special interest group on Year 2000 issues comprising more than 50 Indian software companies which either have tools or are providing solutions for the problem. As part of its efforts to bring Year 2000 to India, Nasscom is holding a series of seminars – the first one took place last month in Luxembourg.

However, some of the leading Indian software companies are already warning that prices for Year 2000 contract work are rising from a base rate of around 25 cents or 30 cents per line of code.

"We are under increasing pressure to sign fixed price deals," says one senior Indian Year 2000 expert.

Cost-savings

Among Indian companies with dedicated Year 2000 programmes, the HCL Group's joint venture with James Martin, the US-based service provider, combines what Gartner describes as "the leading redevelopment and Year 2000 solutions methodology" (The Systems Redevelopment Methodology) with HCL's "software factories" aimed at reducing project time and cutting project costs.

Nearly 3,200 of HCL's 9,000 consultants and developers could be involved in the joint venture and by using HCL's the methodology and leveraging existing project management skills in both parent companies, HCL James Martin should be able to execute between 30 and 40 Year 2000 projects concurrently, according to Mr Ashok Jain, chief executive of HCL James Martin.

"The cost-savings for these projects, if conducted offshore, will range from 30 per cent to 60 per cent less than competitive offerings that do not include offshore services," say the Gartner analysts.

Among other leading Indian companies offering Year 2000 services, Delhi-based IIS Infotech *(see report, page 6)* has developed a packaged solution called IIS 2000 which comprises a proprietary methodology and tools to provide a comprehensive solution to the century date change problem.

Currently, the company has a team of 18 working on the project, a number which Mr Saurabh Srivastava, IIS managing director, expects to rise to about 150.

Continued on page 6

■ Profile • National Associationof Software and Service Companies

A very clear objective

Many trade associations fail in their mission because they fragment and lose sight of their objectives, or cling to protectionist arguments in the face of rising competition. But for the Delhi-based National Association of Software and Service Companies (Nasscom), the mission has remained clear – to act as a catalyst for the growth of the software industry.

India's software industry has a global outlook

Significantly, the Association's mission statement did not mention 'Indian' industry, and the association has embraced and campaigned for free trade ever since.

Nasscom's membership which has grown to over 400 and represents 96 per cent of the revenues of the industry, not only includes all the largest Indian software companies, but also most of the multinationals involved in the Indian industry.

"We do not distinguish between companies owned by Indians, owned by a multinational or owned by anybody else," says Mr Dewang Mehta, *(see picture, page one)*, who became Nasscom's executive director in 1991.

"We do not believe in protectionism, and we have a very global outlook – that has been one of the reasons for our success in establishing ties with various other associations in other countries," he says. "We do not believe in *only* exports, for example. We believe equally in imports: it is a two-way traffic."

The association was formed in New Delhi in July 1988 although its origins date back to 1987, and the first software seminars held in US cities by eight or nine Indian software company chief executives in association with the Department of Electronics.

"The department officers and the chief executives felt that it was important to have an organisation which would keep on doing these activities and more importantly, an association where they could share their experiences."

The association had three main objectives. First, to lobby the Indian government to make its policies "more software-friendly", mainly in the areas of tariffs, taxes and public procurement. Second, to market the Indian software industry both in India and overseas and third, to campaign against piracy.

In the first two areas in particular, Nasscom has been remarkably successful. The industry has won tax concessions for exports and import duties on software have been reduced dramatically – from 270 per cent in 1988 to 10 per cent today. "We believe if we cannot compete with the global software industry in our own country, then we should close down," says Mr Mehta.

Nasscom was also instrumental in encouraging the establishment of India's 10 software technology parks where small and medium-sized companies can set up operations quickly. The Association has also lobbied successfully overseas, particularly in the US over visa and other issues.

Under Mr Mehta's energetic leadership, the association has also extended its marketing activities holding about 15 seminars a year in Europe, Japan, Australia, South Africa and the US.

Since 1991 the association has also held domestic exhibitions culminating this year in Bombay where a football stadium was converted into the largest software exhibition in the Asia/Pacific region attended by about 300,000 visitors.

Next month, Nasscom will hold an even larger exhibition in Delhi, together with the Comdex fair organisers. Dubbed 'the IT India 96 Comdex', the exhibition is aimed, "at raising the awareness of software in our own country".

■ Guest column • UK Science Minister Ian Taylor

Many opportunities for joint ventures

'There is no doubt that India has a huge fund of scientific and educational expertise'

As UK Minister for Science and Technology, I am well aware of India's emergence as a world class supplier in the global information industry. My visit last year helped pave the way to an agreement on closer science and technology links between our two countries.

When I accepted an invitation to address the World Economic Forum in Delhi in October, I saw an ideal opportunity to lead a high profile business delegation India's 'Silicon Valley' to explore how British companies could enhance their presence in this exciting market. There is no doubt that India has a huge fund of scientific and educational expertise.

I particularly wanted to find out more about the international corporations established in Bangalore, where much of new software development takes place.

Expertise

I also wanted to discover how British companies could share expertise and how we could co-operate for mutual benefit. India is an obvious partner for British companies – our shared history makes much in Indian commercial life familiar to British business.

I was glad to see included in my programme a call on BAe-HAL, a joint venture between British Aerospace and Hindustan Aeronautics. Established in 1993, this company concentrates on real-time software including applications for air traffic management and runs a database for British Airways' Frequent Flyer programme.

In the wider development of successful international co-operative ventures, western partners will look increasingly to the Indian Government for open and liberalised markets.

In the 1990s, India has grown twice as fast in the software sector as the US did in the 1980s. A compounded growth of more than 40 per cent is exciting. The value of the industry is now an impressive $1bn, with half of production devoted to export.

While growth in the software sector can be expected to continue, India still has a good way to go before her communications infrastructure is the equal the Asia average. Around £30bn to £40bn of investment is needed to install the further 50-60m telephone lines needed to reach five per cent of the population.

Co-operation

How can British companies find out more about the dynamic software sector? I asked to hear more about 3SE, an Indian company established two years ago, out of a venture between the European Union and the Indian government – a mission to promote co-operation in software between European and Indian companies, achieved through matchmaking from its exhaustive database and helping new entrants to the market to pick their way through the minefield of regulations and licensing requirements.

I am in no doubt that British companies must look more closely at opportunities in the Indian software market.

The UK's Department of Trade and Industry – and the Foreign Office – have a wealth of experience and are ready to help. We must not let the exciting opportunity of developing Indian markets pass us by.

■ 'SoftDev 96' in London

Indian Software Pavilion

A new initiative at SoftDev'96 at London's Olympia this month will be the Indian Software Pavilion, sponsored by the Financial Times. This event brings together some of India's leading software development companies.

Mr Dewang Mehta, executive director of Nasscom, will bring the keynote speech for a two-day seminar programme presented by Indian companies.

This year's SoftDev event, being held on November 27 and 28, takes place alongside WebDev 96. The two events focus on software development for corporate systems, the Internet and the World Wide Web and includes three high-level conferences and exhibitions.

For SoftDev details, call Jon Howell at Interactive Group, 44 (0)181 541 5040; the e-mail address is: softworld@softinfo.com

■ Software piracy

A call for tougher measures

Despite recent measures to curb sales in illegal software, piracy is endemic

At the bottom of Brigade Road, one of the favourite hangouts of Bangalore's young and rapidly growing population of software programmers, are four small shops, each not much larger than a US-style walk-in cupboard.

Bangalore is the centre of India's expanding offshore software development industry – yet, even here, software piracy thrives. Each of the four shops sells CD-Roms packed full with pirated copies of the latest games and business applications software from leading companies including Microsoft, Novell, Symantec, Lotus and Adobe.

Most of the pirated software appears to have originated in China. Rs 1,500 buys 'Solid Gold. Vol 5', a disc with 50 software titles on it, including most of Microsoft's applications, software development and operating system programmes from The Computer Shop.

Judging by the sleeves, software development packages, including the latest Java development kits, are big sellers. Next door, Brigade Computer is selling a *beta* version of the Encyclopedia Britannica for Rs 800. Similar stores exist over India in spite of valiant attempts by the National Association of Software and Service Companies (Nasscom) and the Indian government to crack down on the illegal trade.

Surveys by independent agencies suggest that between 60 per cent and 70 per cent of computer users in India use some pirated software. And a report by Nasscom estimated that the industry lost about $75m through software piracy last year. However, while most industry executives agree that piracy rates are declining, most also contend that piracy is endemic, at least in some market segments.

Smaller companies, first time computer users and some software developers themselves are among those who use pirated software, particularly application tools and system software.

"I would estimate that for every one package of software legally bought, there must be about nine instances of piracy," Mr L C Singh senior vice president of Tata Consultancy Services told the *Economic Times* newspaper. Nevertheless, Nasscom, which spearheaded the campaign against software piracy, has made some headway. Last year, India's new Copyright Act – acknowledged to be one of the toughest in the world – came into effect. The legislation includes a new computer software piracy offence punishable with a prison sentence and heavy fines.

Nasscom has also set up an anti-piracy hotline which provides information on the legal use of software and investigates reports of suspected incidents of piracy. In the first 15 months, the hotline received more than 6,000 calls. Following a series of raids, facilitated by the Business Software Alliance and Nasscom, several high-profile court cases have resulted in prison sentences for the pirates.

At the same time, the gradual reduction of import duties on imported software – duties now stand at 10 per cent – has helped make legal software more affordable, although Indians still complain that the cost of imported software is still about 25 or 30 per cent more than abroad.

While software piracy is seen as mainly affecting imported packages at present, it could also stifle the eventual growth of a domestic packaged software industry. In order to address this issue, most industry executives believe more effective enforcement of the current laws may be necessary.

■ ComputerVision • Case study in software pioneering

Expanding operations

The time difference means round-the-clock engineering is possible

ComputerVision, the US computer-aided design (Cad) software group, is expanding its operations in India by moving into a brand new state-of-the-art development facility in Pune which will open early next year.

The US group has pioneered an architecture called electronic product definition (EPD) which redefines the way consumer goods, engines, cars, ships and aircraft will be designed in the twenty-first century.

EPD aims to replace expensive time-consuming prototyping methods with an integrated series of applications running on a variety of platforms and enterprise-wide data management systems.

US links

The Pune facility, ComputerVision's only R&D centre outside of the US, will employ 300 software developers and will be fully integrated with centres in Bedford, Massachusetts and San Diego, California. It is linked via a 128Kb backbone network to the Bedford and San Diego facilities, as well as the group's sales and service operations around the world.

The time difference between US and India means that round-the-clock engineering is possible, thereby improving productivity by a substantial margin.

The group's international customers include Fiat, Peugeot, BMW, Mercedes-Benz, Rolls-Royce, Lucas Aerospace, the Rover group, British Telecom, Lockheed Martin and customers in India like TVS Suzuki and Godrej GE Appliances.

■ PCS and Avis • Example of an international partnership

East meets West to mutual benefit

Globalisation, says PCS Industries, the Bombay-based group, is no longer mere management jargon.

PCS points to its relationship with Avis Europe, Europe's largest car hire firm, as an example of how large multinational companies are responding to changed competitive environments by building alliances and partnerships.

Since the fall of the Berlin Wall, Avis has expanded rapidly to establish a presence in the emerging eastern European markets. It saw information technology as an important component of its strategy. In particular, to keep pace with business initiatives, Avis needed to beef up its IT support.

In order to achieve this, Avis selected PCL, India's 30th largest software group, as a partner in 1994 and now views the Indian group as virtually an extension of its own IT operations.

To meet the Avis requirements for quick response and high quality, PCS has set up an offshore development centre in Bombay equipped with a PC network built around a Sun Sparc server, which is connected through a 64Kbps satellite link into the Avis wide area network.

Support team

PCS began by sending analysts to Avis to learn about its business. At the same time, it set up the Bombay facility for the offshore support team. Today, a team of 30 professionals support a wide range of development needs for Avis. Over the past two years the company estimates it has delivered over 60 man-years of effort.

Among the projects and work undertaken, the PCS team has delivered software enhancements to support new business initiatives, adapted software to comply with specific country laws, provided national language support, migrated software "front-ends" and provided Avis with quick prototyping and pre-sales support.

Among specific projects PCS has developed a self quotation module for Avis and demonstration software for exhibitions. More generally, PCS claims the partnership has enabled Avis to deliver a quick response to its own customers and meet its own business objectives.

"With a resourceful offshore partner, Avis can now concentrate on its core business and compete more effectively in the marketplace," says PCS, which has also set up a Triton customisation center for Baan, the Dutch enterprise resource planning specialist.

■ Rolta India • Award-winner in CAD software

A winner abroad

The company now ranks among the world's top conversion vendors

Bombay-based Rolta India has carved out a niche in India as a cad/cam (computer aided design/computer aided manufacturing) specialist and has won a number of prestigious contracts including what it claims is the largest software services export order.

The company which works closely with both Intergraph and AT&T in the US and Rolta International, its US subsidiary, recently won a Rs1bn contract to provide AM/FM and CAD Conversion Service for the Saudi Arabian posts, telegraphs and telecommunications ministry.

AT&T was awarded a $4bn contract to install an additional 1.5m telephone lines, effectively doubling the size of the existing Saudi telecommunications network. In addition 200,000 cellular telephone lines will also be provided under the main contract.

Contract

Intergraph have been awarded a contract by AT&T to provide workstations running Microsoft Windows NT, 14 servers and facilities rule-based application model management environment (Framme) software along with consulting and CAD Conversion Services.

Intergraph, in turn, has awarded a contract to Rolta to provide the CAD conversion services which include creation of a digital data base from 30,000 paper and mylar documents into their Framme environment.

Instead of having to search through a filing cabinet for information, the new system will enable engineers in the subscription and business offices of Saudi Telecom to access digital records and quickly determine the available resources. In the past, they had to rely on paper-based records. The project will also include 40,000 building drawings.

This contract is to be completed in a period of 5 years and execution has already begun.

"With this order, following closely on the heels of a Rs80m order from Hong Kong Telecom, Rolta has been firmly established in the world of CAD Conversion Services and now ranks among the top conversion vendors the world," says Mr Kamal K. Singh, chairman and managing director.

In total, Rolta International has won orders worth more than Rs1.2bn from various telephone and power utilities in US, Middle East, Far East and New Zealand.

■ 'The millennium bomb'

Big opportunity

Continued from page 5:

Although IIS already has its own Year 2000 tools, the group has also announced a partnership with Viasoft, one of the leading US-based tool vendors. "We are happy to work with any tool-provider as contractors or sub-contractors," says Mr Srivastava.

Like other Indian software companies, IIS sees the Year 2000 problems as an opportunity to grow the business and form new customer contacts. But Mr Srivastava also warns that those companies without a Year 2000 solution could find their existing business squeezed as their overseas customers switch spending to urgent millennium work.

In Bangalore, Infosys, another leading Indian software group, already has 100 people working on Year 2000 projects. "This is not really a complex problem," says Mr D.N. Prahlad, senior vice president, "but this is a management problem because of the volume of code that has to be scanned." He likens the problem to a "massive maintenance project" – something Infosys and many other Indian companies are very familiar with.

Infosys has defined a three-part Year 2000 package comprising identification of the problem, correction using automated tools as far as possible and testing. Infosys has already completed projects involving between 4m and 5m lines of code for two companies and has several other deals in the pipeline.

Like many other Indian software companies, Infosys plans to use the addition revenues generated by its Year 2000 work to fund an expanded research and development programme and extend its push into higher value added products and services.

Time may be running out to sign up with India's leading offshore service companies for Year 2000 services, but at least as Mr Prahlad quips, "we have an extra two days because January 1 2000 is a Saturday."

■ IIS Infotech • Delhi-based software specialist

Successful track record

The company has broadened its product offerings and relationships from modest beginnings

Along with many other large companies, Britain's North West Water was cautious and conservative in its approach to choosing software suppliers.

But the task the water utility faced in upgrading and enhancing the company's works management system and other operations was immense. North West therefore decided that it would have to look offshore for help.

Top exporter

After a detailed and comprehensive search and review in 1992, North West chose IIS Infotech, a well-established Delhi-based group which employs about 400 software professionals and is among the top 20 Indian software exporters.

IIS was the first Indian software company to obtain ISO9001/TickIT certification in 1992 and the first to use high-speed data links over six years ago to execute offshore projects.

Today, the group has a 128Kbps link to the UK and a 64Kbps satellite link to the US where it has a geometric modeling joint venture. Its other main specialities include migration work and re-engineering software applications for clients ranging from Merrill Lynch to Abbey National and Reuters.

The group's UK-based subsidiary ranks as one of the two leading suppliers of offshore software services and has established a track record for delivering successful projects since 1985.

Like many other Indian software companies, the relationship of IIS with its big overseas clients often begins in a relatively modest way. For example, from being a sub-contractor to North West's consultants doing basic coding work, IIS now has the status of a prime contractor executing turnkey projects.

"It has been a very good relationship," says Mr Saurabh Srivastava, IIS managing director. More generally he says the work with North West and other large overseas customers has helped the group "reach critical mass ... now we have the infrastructure and the size to bid for the bigger projects," he says, "we have shifted our vision."

Joint ventures

In particular, IIS is expanding geographically, setting up a company in the US, a joint venture in Holland and buying a 50 per cent stake in a Singapore venture – its first investment east of India. The aim, says Mr Srivastava, is to be truly global. IIS is also broadening its product offerings, including setting up a unit to deal with Year 2000 projects and also plans to design and build its own products.

■ CITIL • Producer of MicroBanker software packages

Initiative pays off

Banks in 35 countries have installed the company's software packages

In the early 1990s when almost the whole of the Indian software industry was concentrating on the software services market, one pioneering company took the bold initiative of venturing into the packaged software vertical market.

CITIL, the Bombay-based software development company, owned by Citicorp, launched the first version of its MicroBanker software in 1991 targeting the international banking community and competing directly with established vendors such as Britain's ACT Kindle and MKI.

Over the past five years, MicroBanker has achieved an enviable reputation and was rated as the top-selling integrated banking software suite in 1995 by one London-based trade magazine.

In total, 62 banks spread throughout 35 countries have installed the package – a significant success for a "Made in India" software package.

New customers

Among the recent customers for the product are HDFC Bank in Bombay, which is using the package in 18 of its branches.

Another customer is the Finance Bank of Zambia, which chose MicroBanker for its 35-branch network in Zambia, and its three overseas branches.

The product is backed by CITIL's Bangalore facility where enhancements are carried out and where worldwide customers can receive 24-hour, seven-days-a-week support.

In addition, CITIL has set up local support centres in six overseas countries.

MicroBanker is currently in its release 9.2 version and the product has built-in interfaces to CITIL's other software products. These include MoneyMaker, a dealing room package, and Finware for retail banking, plus a customer access system and an electronic banking solution for corporate customers.

The Indian group believes its commitment to continuous improvement in the software engineering process has played a pivotal role in its success in delivering high quality packaged products and services.

The company has adopted the capability maturity model of software engineering and recently achieved Level 4 certification, placing it among the top two per cent of the world's software companies.

Information Technology

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Java poised to crack it open

Researchers say that new Java software 'is at the epicentre of a seismic shift in the $650bn global computer industry'. Paul Taylor examines the claims

Pony-tailed programmers and computer 'nerds' are getting excited over a new computer programming language – named after *a type of gourmet coffee bean* – which promises to unleash their creativity and liven-up network computing in general, and the Internet and corporate intranets in particular.

But perhaps more surprisingly, Sun Microsystem's Java software has also caught the public's imagination and fired up the enthusiasm of big business customers who are betting that it will lower the cost of desktop computing and improve their efficiency and competitiveness.

According to a recent study completed by Forrester Research, more than 60 per cent of top US companies are experimenting with Java and over 40 per cent have already decided that it will become crucial to their Internet computing strategy within a year.

So what is all the excitement about? Java is a programming language developed by in 1990 by James Gosling, a programmer at Sun Microsystems, the US-based workstation vendor whose machines supply most of the computing power behind the World Wide Web.

Originally called 'Oak', it was intended as a control programming language to be used in domestic products such as set top boxes and video recorders and was therefore designed to be compact and easy to develop. "Java is fully 'buzzword-compliant'," jokes Martyn Lambert, director of the network computing sales group at Sun in the UK.

"It is a simple object-orientated, distributed, interpreted, robust, secure, architecture neutral, portable, high-performance, multi-threaded and dynamic language." That may help explain Java's popularity among fashion conscious programmers who are rushing to learn the language and join Java development teams, but what really makes Java special and important to businesses is that it is truly "platform independent".

Currently, if a programmer wants to develop a new application (software programme), it has to be written for a specific combination of computer hardware and operating system, for example, an application developed for a Windows-based machine will not work on a Unix workstation. That means that if a corporate in-house software development team wants all computers to be able to run a particular application, a separate version has to be developed for each operating system.

Java is designed to break the fixed links between the application and the operating system, so that developers can create programmes which can run on any computer. This means that programmers can focus on developing *applications once* only, and then distribute the application to anyone no matter what computer or operating system they are using.

Sun's Java achieves this alchemy in a simple but clever way. Programmes written in Java are not 'ready-to-run' applications, but are in a special format called byte code. To turn this code into a working application, the computer must be running a separate process known as the Java virtual machine. This is another small software programme that reads the byte code and translates it into instructions the computer and operating system can understand.

Java virtual machines are available for most operating systems and are already incorporated into most of the main web browser packages including the latest versions of Netscape Navigator and Microsoft's Internet Explorer. This means that every computer running a modern web browser is already Java-enabled.

Programmers initially demonstrated the simplicity and interactive potential of Java by building so-called Java applets, small software applications such as revolving corporate logos or ticker-tapes, into Web documents – *see buzzword explanations, above, right.*

Cost-savings in desktop computing

While many people dismissed these early applets as insignificant, the full implications of Java and Java programming are only just beginning to be recognised.

For example, Java applets can provide a type of 'just-in-time' computing. Instead of installing huge programs every time they need a new function, computer users can download an applet across a network, such as the Internet.

Java's advocates also believe that it will help cut the soaring costs of desktop computing. For example, Dun & Bradstreet has built a Java applet that will let employees issue a purchase request to a corporate server without having a full-blown purchasing program installed on their personal computers. Other software developers have created Java applets that let Web browsers view corporate databases and mainframe applications.

But the main savings are expected to come from reduced maintenance and upgrading costs – most estimates suggest the initial purchase price of a personal computer only represents a fraction of the total cost of ownership which may be as high as $8,000 a year. Instead of having to visit every PC on a network in order to upgrade software or fix a software bug, a Java-based application can simply be replaced or upgraded centrally and is immediately accessible to all the desktop users.

This model has particular appeal for service organisations such as telecommunications companies, information distributors and financial services providers.

Reflecting this, some of the early adopters of Java technology in the UK include British Telecommunications, Reuters and NatWest bank.

BT, for example, has developed a Java-driven data visualisation application which takes data on the volume of telephone calls across the UK and transforms it into a graphical format. Meanwhile, NatWest has developed an online banking package using Java which will be offered to its small business customers along with a browser to access the service.

Charlie Herbert, manager of NatWest's new delivery channel unit, says Java has helped ease concerns about customer support and security. "I control the software and I can change it or fix bugs 'on the hoof'," he says.

Java's potential is not however limited to desktop machines. The next generation of personal digital assistants – hand-held computer and communications devices – may well be Java-powered and several telecom equipment companies, including Canada's Northern Telecom, have announced plans for Java-enabled telephones which will also enable users to access the Internet and corporate intranets from a telephone handset.

Almost all the leading participants in the emerging Internet software market have agreed to support the Java language – even though it only became fully available in February this year. Among them, International Business Machines in particular is moving rapidly to incorporate Java in its range of computer platforms and has established its Java Technology Centre at its Hursley laboratory in the UK.

"IBM is putting Java on all of its computer platforms including OS/2, AIX, AS/400 and mainframe MVS," says Simon Phipps who is in charge of IBM's Java development work. "Java makes it possible once again for a business to leverage its size by deploying enterprise-wide solutions."

But not everyone is so enthusiastic. Although Microsoft has also licensed Java, Charles Fitzgerald, who is in charge of Microsoft's ActiveX technology, has noted, "Java is not a cure for cancer, it doesn't repeal the laws of gravity – and there's a lot of things you *can't* do with it".

Earlier this year, the Gartner Group also gave some reasons for caution. Gartner argued that Java was a young and immature language, that there

Continued on back page

Re-arranging the IT landscape: Java offers cost-saving benefits across a wide spectrum of computing applications, ranging from telecommunication and finance to *manufacturing* and education. Many companies see Java as crucial to their internet strategies

Java buzzwords and benefits

Corporate benefits include:

- Lower desktop support costs.
- Enables the use of older 'legacy' desktop equipment.
- Single-user interface.
- Widespread industry support.
- Potential for low-cost network computers.
- Unified development language.
- Centralised application management.
- Duke, the lively Java 'mascot' shown above, symbolises the software's ability to make the Internet and corporate intranets more dynamic, accessible and user-friendly.

Java buzzwords:

- **Java:** a platform-independent programming language.
- **Java virtual machine:** a small programme which translates Java byte code into computer instructions.
- **Java Applets:** small Java programmes.
- **Java beans:** a framework or architecture into which a programmer can 'plug in' components.
- **Hot Java:** Sun Microsystem's Java-enabled web browser.
- **Java chips:** semiconductors designed to run Java programmes at lightning speed.

■ Interview with Joe Tucci of Wang Laboratories • By Paul Taylor

An open approach to business

Joe Tucci: "It is easy to become obsolete unless you constantly evaluate and adjust your strategy"

Wang, the one-time office automation leader, has reinvented itself as a services and software supplier

Wang Labs' word-processors were synonymous with office automation in the late 1970s and early 1980s before the personal computer revolution swept them off the desktop and plunged the Massachusetts-based group into huge losses and a Chapter 11 bankruptcy filing in 1992.

But now Wang – under Joe Tucci, chief executive since 1993 – has emerged from Chapter 11 and reinvented itself as an independent computer services supplier and one of the fastest growing vendors of workflow, integrated imaging and document management software.

Looking back, Tucci acknowledges that "in the early 1980s, Wang was the standard for word-processing office automation, and most large enterprises, whether government or private business, standardised on Wang both for office automation and e-mail".

Initially, Wang's strategy, based on proprietary technology, worked. Company turnover grew rapidly from $300m and to almost $3bn in 1986. "It was incredibly rapid growth," says Tucci. But Wang also made mistakes. "I think the biggest failure was the failure to open up," says Tucci.

Not only did Wang fail to adapt to the rise of open systems and Unix, but the company also failed to ensure quickly enough that its systems could work with equipment from other industry leaders like Digital Equipment and International Business Machines. In addition, rather than forging distribution agreements with other companies, Wang built up a huge internal salesforce.

"In the heyday there were well over 3,000 sales reps and they did very little partnering," says Tucci. "Open for me means the open systems piece, the interoperability piece and being open to work with others, and I think Wang failed on all three accounts."

When Tucci took over as part of a new management team three years ago, Wang was in the middle of a restructuring process designed to refocus the group on two growth areas.

Since the late 1980s most of Wang's systems had been working in open system and client/server environments and therefore the group had acquired skills and expertise not only installing and maintaining its own systems, but in integrating them into heterogeneous local area networks.

"We had worldwide capability in building these sort of Lans, so we decided to build on this," says Tucci. "Secondly Wang had pioneered imaging, workflow, and document management technologies so we started re-writing those for the open environment and made that our second business.

"Wang today is basically two businesses, a services business and a software business. We run them quite independently. Each one has its own sales force, its own R&D, its own financial staffs."

Looking forward, Tucci expects the services business to report revenues of about $1.5bn in the year from September, and the software side to grow from $50m last year to more than $100m.

"We believe we have got on the wave early," says the Wang chief executive. "We saw the network centric world coming and we designed more what they call light clients which positioned us very well for the Internet and network computing phenomenon."

Wang has also formed a close strategic partnership with Microsoft (which has invested $90m in Wang's preferred stock) and was an early adopter and advocate of Windows NT.

"In the network computing world our vision is to be a leader in network and desktop outsourcing," says Tucci. "The CEOs of companies struggle every day with the increasing costs of client-server or network centric computing and there seems to be a worldwide trend to focus more and more on core competencies. That means companies are outsourcing big pieces of their IT.

"Our biggest problem now is hiring and training people," he says. Among the services Wang provides for its customers are services procurement, systems design and implementation, and asset management. Most companies, he says, still do not know whether they have one year, two year, or three year guarantees on hardware, what the guarantee on software is, or what rights they have to software updates. All of that is part of warranty and asset management."

Meanwhile, he says, "a lot of companies are using legacy systems". For example many companies have installed Lotus cc: Mail or Microsoft Mail for messaging. But, says Tucci, "they want to be on (Microsoft) Exchange and the Mapi messaging systems of the future. That move is not trivial, so we try to focus on the infrastructure rather than the specific solution".

Tucci also emphasises the importance of partnerships. "Many of our partners are the EDSs, Computer Sciences or Cap Gemini's because even those large companies do not have the skills in this space and they would tend to subcontract their outsourcing activies to companies like ours which are highly specialised."

Similarly Wang also provides multivendor platform support services for companies like Sun Microsystems and Dell Computer: "Because of our independence we are not threatening," says Tucci. Among Wang's other clients are Packard-Bell, Zenith, Siemens' Pyramid unit in the US, Apple Computer and Microsoft.

Tucci refers to Wang's rapidly expanding software business as "the office automation systems of the future". These include structured workflow, imaging and document management packages. "Of course," says Tucci, "as you digitise this much information you create a storage problem, so we have a hierarchical storage management product."

While Wang continues to invest in Unix, its largest investment is in Microsoft Windows NT. "We are riding that wave hard," says Tucci, "That is not to say we are abandoning Unix. We still have a very substantial investment in Unix but we have really invested to be the leaders in NT in this space.

"I think the office of the future will be Microsoft based," he says. In the corporate world he says Microsoft is a 'one purchase deal'. "We are back to a homogeneous environment from a software point of view, sort of what you had in the old days with Wang, except with Wang you had to buy VS (Wang's proprietary software) and you had to buy the Wang workstation, whereas today you have a wide choice of servers, PC manufacturers and even microprocessor platforms.

But Tucci also emphasises that no company in the IT industry can afford to become complacent. As a company re-born, he views Wang's key advantages as its speed and nimbleness. "We don't have a memory. We are a new business. We don't have a big legacy," he says.

"The industry is changing very quickly and it is easy to become obsolete unless you constantly evaluate and adjust your strategy." He tells Wang's employees: "If you are not highly adaptive and don't like change, you have picked the wrong company and you're in the wrong industry. But if you are looking for a vast opportunity and can commit yourself to hard work and innovation, you can reap the rewards this company and industry has to offer. So if this excites you, put on your seatbelts and let's go."

FT IT

MONTHLY REVIEW

The FT-IT Review is published on the first Wednesday of the month, except in August.

WEEKLY FEATURES

In addition, a weekly FT-IT news and feature page is published on each of the other Wednesdays of the month in the UK edition of the FT, and on Fridays in editions outside the UK. Regular items include a 'watching brief' and an update on new IT business applications.

NEW ONLINE MAGAZINE

'Doing Business Online', the first of a new series of glossy magazines will appear with the next issue of the FT-IT Review on December 4.

IT APPOINTMENTS

Weekly IT appointments pages also appear on Wednesdays in the UK and on Fridays in international editions of the FT.
For contact details relating to FT-IT features, please see information below.

FT-IT Review, editorial controller: Michael Wiltshire
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● The next issue, December 4:
Main Focus: Computing and communications for the small business; IT in the home.
IT Directions: New media.
Software: Educational packages and games.
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The internetworking revolution • By Paul Taylor

Scramble for shares in a $470bn world market

As businessess move towards the information age, office system suppliers are in a race to help users exploit the vast pools of data becoming available on the Internet and through other online electronic services

Over the past 18 months, the emergence of the Internet as a business tool, and the rapid adoption of open Internet technologies as the foundation for internal networks, or intranets, has transformed the outlook for technology in the office and further blurred the distinctions between telephony and data processing.

The immediate impact of this latest IT revolution is reflected in the scramble for new business among traditional suppliers to the $470bn worldwide market for IT products and services. Well-established companies such as IBM, Microsoft and Oracle are adapting to the challenges and opportunities posed by the phenomenal growth of the Internet and the prospects for electronic commerce.

Meanwhile, newer companies such as Netscape Communications, the California Internet start-up, and Netcom, the Internet service provider, have been catapulted to prominence while the Internet "plumbers" – such as Cisco, the fast-growing internetworking equipment supplier, and Sun Microsystems, whose web servers help power the Internet – have become hot shares.

Together, these companies are putting together the digital infrastructure for the next decade – an infrastructure that they believe will provide their corporate customers with the electronic tools they need to compete in an era in which the old distinctions between voice and data and between computers and telephones no longer apply.

Naturally, most IT suppliers have their own angle on the internetworking revolution. For example, IBM – the grandfather of office automation – sees the growth of the Internet and internetworking as an opportunity to exploit its expertise in systems integration. IBM has also jumped aboard the "network computer" bandwagon, which promises low-cost digital devices that will rely on networks and servers for most of their power.

Similarly, Microsoft, which dominates the market for desktop operating systems and integrated "office" software suites, has responded forcefully to the threat posed by Netscape and other Internet start-ups. A year ago, Mr Bill Gates, Microsoft's chairman, set out a new strategy for Microsoft aimed at placing the Internet at the core of all the company's office products and technologies.

One result of this change is that Internet Explorer, Microsoft's Internet browser software, will provide the user-interface to the next generation of Microsoft desktop operating systems. From the end users' point of view this will remove the remaining distinctions between locally stored data, and information stored elsewhere on an intranet or the Internet.

Indeed, the whole basis for using IT systems in the office has changed dramatically in recent years. In the days of the corporate mainframe or departmental mini computer, corporate customers mainly thought of IT systems as a means to cut costs and automate existing functions – hence the ever-elusive dream of the paperless office.

Today, however, virtually no-one talks about "office automation". Instead, companies are investing in high performance multimedia network systems to improve their competitiveness, reduce time to market and respond faster and more effectively to customer requirements.

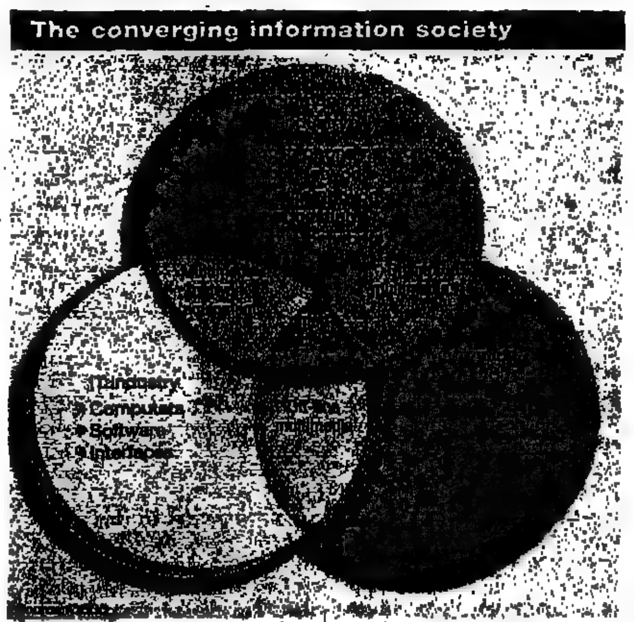
Desktop PCs put more direct power in the hands of the end-users, and local area networks made the sharing of data and peripherals easier. But now all these systems are being interconnected using standard Internet protocols to provide seamless internal access to the full resources of an enterprise.

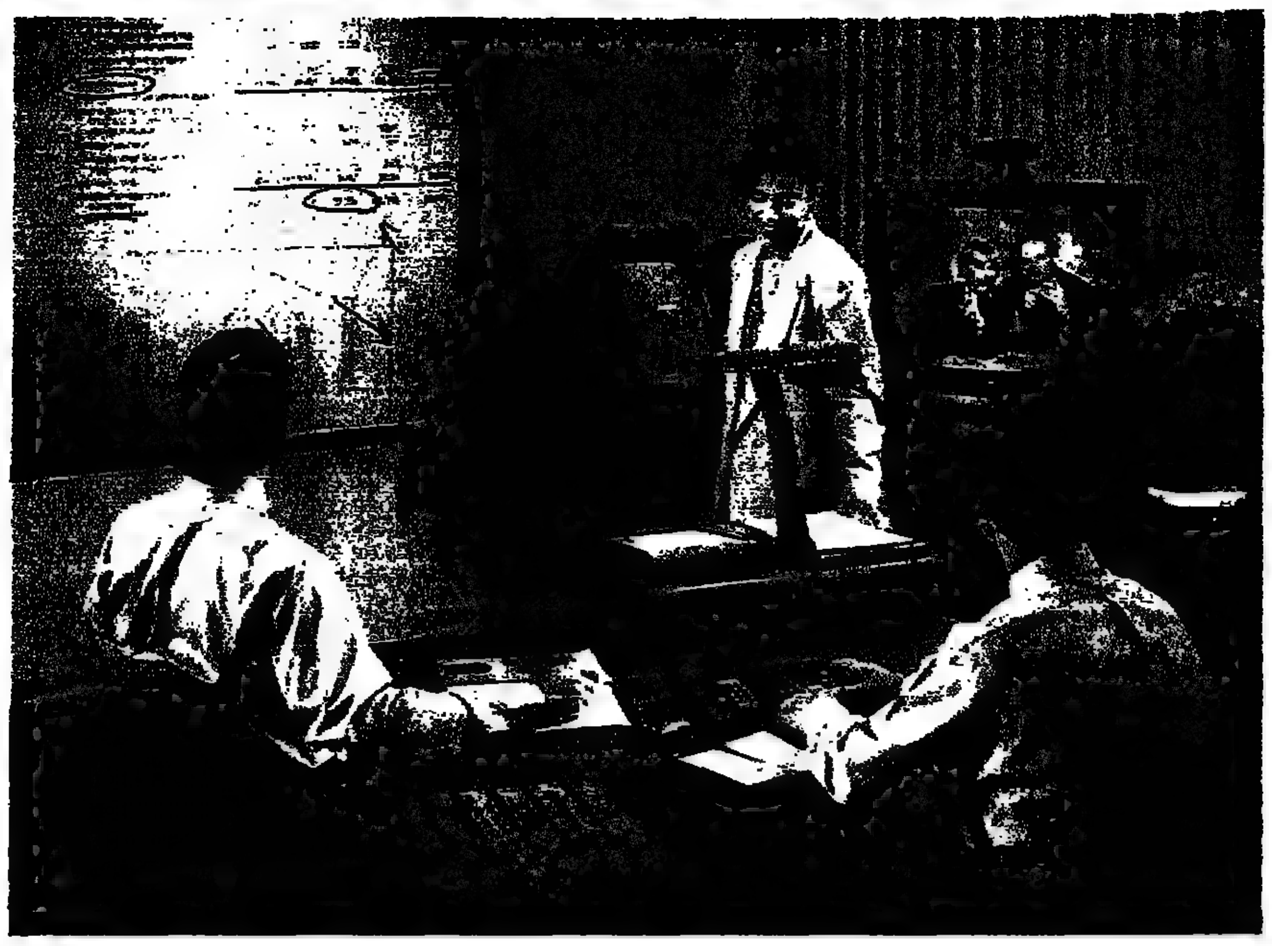
Firewalls and other security devices stand guard over these valuable internal resources while providing gateways to the external digital world for those inside, and selective access for partners, suppliers and customers. Although many companies have sought to focus on their "core businesses" and outsource peripheral operations; they are also seeking to use technologies such as e-mail, groupware products and electronic data interchange to build closer relationships with their business partners.

In the office environment, most medium and large-scale companies already rely on a wide range of digital devices and technologies to run their core business operations. Increasingly, these devices – ranging from photocopiers to coffee vending machines – are being hooked together and given their own "intelligence" so that they can function more efficiently.

Not only do these integrated systems ensure the smooth operation of basic office processes, but they also increasingly provide key interfaces with both suppliers and customers. Customer helplines are equipped with sophisticated voice systems; computer telephone integration technology brings together the power of data processing and the reach of the telephone; Web sites give even small local companies the chance to compete with multinationals; electronic mail provides a low-cost alternative to more traditional forms of communication.

The converging information society





Electronic 'whiteboards' are becoming a key feature of videoconferencing. At the touch of a button, the Groupview document conference projector, above, from PictureTel, enables business users to send high resolution images of paper documents, transparencies and objects to distant meeting sites. See also report by Nusia Moran on whiteboards, page 6: the latest trend in teamwork.

The growing complexity of office systems has placed network management tools at a premium. The worldwide market for network maintenance and help-desk services is worth around $19bn and growing by about 15 per cent a year.

Meanwhile, as the shift towards the fully integrated digital office gathers pace, huge volumes of data are being generated, data that needs to be stored, sifted and manipulated if they are to give useful information.

So today some of the fastest-growing IT areas are workflow, document and image management systems, data warehousing, enterprise information systems and data visualisation – all methods to extract the maximum value from massive quantities of raw material – *see software report, pages 14-17.* The market for open systems production workflow and imaging software alone is worth about $400m and growing by about 35 per cent a year.

An increasing number of companies, including those in the financial services industry, is beginning to use sophisticated data mining techniques to target individual consumers, while others are using Internet technologies to personalise their services. The new management mantra is: use IT "to sell to a market of one".

Meanwhile, the explosion of information available on the Internet and through other online electronic information services has generated new interest in sophisticated search techniques and "information robots", which can seek out and highlight useful information. Such techniques are already being used to reduce purchasing costs, track competitors and identify market opportunities.

Indeed, in the new information age one of the key differentiators between successful and unsuccessful organisations may well be their ability to exploit effectively the huge pools of information likely to be at their command.

As the demand grows for advanced forms of data communications within the office such as "whiteboarding" *(see report, page six)* and multimedia e-mail, the sheer volume and variety of data requiring delivery to the desktop is pushing existing networking technologies to the limit and fuelling the search for an enterprise-wide, high-speed broadband technology capable of carrying all an organisation's electronic traffic. The main candidates appear to be Fast Ethernet and Asynchronous Transfer Mode (ATM) which can support video and digital sound as well as data and graphics.

Other "inefficiencies" in the office equipment infrastructure have also begun to attract attention. In particular, the lack of flexibility offered and the unnecessary costs imposed by hard-wired telecom links. Cordless telephony, wireless networking and high-speed infra-red links between devices such as printers and portable pcs are all expected to play a bigger role in the office of the future.

Outside the office, a growing number of businesses is already using digital cellular telephony, portable computers and mobile data networks to exchange information between the central office database and mobile employees, such as salesmen or engineers.

Indeed, for some companies, the requirement for a full scale physical office may even disappear. In the "virtual corporation", staff will work mostly from home or while "on the road" and yet still have full access to the panoply of digital corporate and Internet resources of the dawning information age.

■ Outsourcing IT services • By Nuala Moran

Take your partners

In the recession the prevailing argument for outsourcing IT services was cost reduction. Now sentiment is changing and outsourcing relationships are increasingly strategic, rather than tactical

Within the next few years, 80 per cent of the 400 top organisations in the UK will form a strategic partnership for the supply and management of IT services. In effect, they will be acknowledging that they can no longer cope alone with the opposing pressures of fostering a flexible and responsive IT capability at the same time as controlling the cost.

This signals a change in approach to the outsourcing of IT, which is currently mainly done for tactical reasons, to reduce costs or to deal with particular projects.

"There are strong indications that a radical change will occur in the structure of the majority of IT divisions in the top 400 UK organisations within the next few years," according to a report by the international research company, Input.

These organisations each spend more than £12m a year on information technology. "They will on average outsource 40 per cent of this," says Peter Dooley, marketing manager of the IT services company, FI Group, which commissioned the survey.

"They are putting out such an enormous part of the IT function that attitudes to outsourcing will change. At this level it will affect the structure of the business, and they will be looking for strategic and long term partnerships."

Through these partnerships, companies will aim for an IT capability which can respond to the needs of the business, while keeping costs manageable. This will allow a company to move in and out of new product areas without either needing a huge investment in IT, or paying for IT that is surplus to requirements.

Dooley: outsourcing allows companies to grow faster

Companies now expect the majority of revenue to come from new products. Many of these have information technology embedded in them, or are enabled by IT. Product lifetime is becoming shorter, and companies cannot allow the process of gearing up IT to cause a delay in getting a product to market.

"You can no longer afford to have an IT pipeline of a particular size, and then work through projects according to their priority rating," says Mr Dooley. "Now if you are six months late with a product, you could lose half of its lifetime profitability."

Furthermore, outsourcing IT functions allows companies to grow faster because it removes the constraint of capital investment in computer systems.

For example, a credit card company can recruit 20,000 new customers without having to expand its processing capability. Takeovers and mergers are also pushing companies into closer relationships with outsourcing suppliers. The cost-savings achieved when two companies are consolidated can be greater if a supplier or suppliers provide IT services for the whole, rather than integrating two sets of systems, or expanding one of them to meet the needs of the enlarged organisation.

An example is the $5bn merger of the European downstream assets of British Petroleum and Mobil of the US. The merged organisation announced in October that it will outsource its accounting and financial transactions, along with more than 700 staff to Andersen Consulting and Price Waterhouse.

The company would not say how much it might save by outsourcing. But instead of running separate accounting systems in each of the 43 countries covered by the joint venture agreement, it will be paying the outsourcing partners to run one system each.

Apart from reshaping IT to make it responsive to business requirements, IT directors are now facing the huge overhead of dealing with the year 2000 problem.

John Willmott: The year 2000 problem will be costly

Most older computer programs, particularly those that run on mainframes, use only two digits to designate the year – for example 86 for 1986. Computer systems that have not been changed by midnight on December 31, 1999 will respond to the start of a year ending with the digits 00 by assuming that there is an error, and stop working, or interpret the year as 1900. This will invalidate all kinds of data-related calculations, sort routines and indexing procedures.

Dealing with this problem threatens to be costly and distracting. Even companies which consider their systems to be date compliant will have to do an audit. Also, compliant systems could be undermined by data coming from suppliers or customers.

Having a close outsourcing relationship will make it easier to smooth out workloads associated with the year 2000 projects, and ensure this work is not carried out at the expense of projects which drive the business forward, says Mr John Willmott, manager of Input's outsourcing programme.

Another imminent problem for banks and other financial institutions is the introduction of a single European currency. Even if the UK does not join, systems will need changing to accommodate the single currency. Mr Dooley comments: "With European Monetary Union and the year 2000 problem, 1998 looks like being a horrendous year with much skilled input required just to stand still. But organisations will not need that level of people all the time."

Companies need their IT capability to be scaleable, allowing it to be turned up for a new product launch, or turned down to avoid duplication in a takeover or merger. "The problem for IT directors is that change is like London buses: nothing happens for a while, then it all happens at once," says Mr Dooley.

"This is why they are now looking for a different type of relationship with external suppliers. Change is lumpy. Companies are looking for partnerships which will help to smooth it out."

Operators at their workstations in the new telephone banking operation at Halifax Direct, in Water Lane, Leeds. Torch Telecom is providing 330 telephone lines through its high-tech network for Halifax Direct, which is introducing its services on a phased basis. Business telephone services are being transformed with enhanced software: see also reports on call centres, pages 8 and 17

■ Computing on the move • By Paul Taylor

Portable PCs make steady inroads into desktop market

With a few clicks of a mouse, notebook PC users can gain high speed remote access to e-mail, the Internet, or a corporate intranet

The 'notebook PC' – once viewed as little more than an expensive executive play-thing – has firmly established itself as a mainstream business tool, helping individuals to stay in touch while on the move and enabling organisations to maintain or extend their competitive edge.

At the same time, a growing number of organisations and 'virtual companies' in particular, view the high performance portable PC as a more flexible alternative to a 'traditional desktop – a machine which can be hooked into the corporate network via a docking station or network card while in the office, then taken home – or on the road, when traveling.

Used in conjunction with fixed or wireless communications links and credit-card sized data cards or high speed fax modems while traveling, the portable PC is enabling companies and other organisations boost customer service, improve productivity and provide additional workforce flexibility.

Today, high speed remote access to e-mail, the Internet, or an internal corporate intranet, can be just a few mouse-clicks away, even while on the move. Sophisticated integrated software packages, such as Procomm Plus and WinFax Pro, provide easy data communications while on the road using high speed data a fax modems which now include V34bis devices capable of transmitting data at 33,600bps (bits per second).

For other business users, including home workers, remote access programmes such as LapLink and pcAnywhere, enable the portable PC user to log-in and take control of a desktop as though they were sitting in front of the office machine. Other packages, including groupware such as Lotus Notes and an increasing number of Internet-enabled applications, are also designed to work across local or wide-area communications links, enabling co-operative working.

In Europe in particular, the arrival of digital GSM (Global System for Mobiles) cellular digital networks has made keeping in touch with the office while on the move, much easier over the past five years. Portable PCs equipped with a cellular data card can be plugged into a digital GSM handset to send or receive data from almost anywhere in Europe – and a growing number of other places where there is a GSM network.

"Companies are acquiring portables in record numbers, indicating pent-up demand for the flexibility afforded by being mobile," noted a recent study of the European market for portable PCs prepared by International Data Corporation for Dell Computer, one of the notebook market leaders, with its range of Latitude machines.

Sales of portable PCs, which are also manufactured by companies such as Toshiba, Compaq, International Business Machines and Apple Computer, have been growing twice as fast as desktops in some markets and are expected to continue to outperform the general PC market.

The value of sales of mobile computers will more than double from $30bn last year to nearly $80bn by the end of the decade, an 18 per cent compound annual growth rate, according to a recent study, *Pen, Palmtop and Notebook Computers*, prepared by Frost & Sullivan, the market research firm.

This demand is driven, at least in part, by the emerging trend for companies replace desktops with portables which are increasingly sold with docking stations or port replicators enabling them to easily integrate with corporate networks.

For example, Dell says that 70 per cent of its new Latitude machines sold in the UK are sold with port replicators which, aside from the usual communications, external video, keyboard and mouse ports, also include built-in support for Scsi (small computer serial interface) devices and network adapters.

"Continuous price and performance improvements make the decision to substitute portables for desktops easier," says the Frost & Sullivan report. "Businesses in Japan commonly use portables now as their primary computers."

> The gap in performance between desktop machines and new portables has narrowed considerably

Similarly, IDC suggests that the portable PC is the primary system half the time at large and medium-sized companies in the US, but portable PC users in Europe appear to be lagging their international counterparts.

The growing popularity of portables also reflects technological and manufacturing advances in areas such as semiconductor packaging, screen design and battery technology, as well as the relentless drop in component prices, particularly for Ram (random access memory) and hard disk drives.

Until relatively recently, portables suffered a number of disadvantages over their desktop counterparts. However, over the past year both the performance gap between desktop machines and their portables counterparts and the price premium paid for portables have narrowed considerably. Two years ago a portable machine cost on average 2.8 times the price of a comparable desktop, now the premium is down to 40 per cent.

Intel, the world's leading microprocessor manufacturer, has targeted the mobile computer for particular attention, developing a series of light-weight chips with low-power consumption specifically for portables. As a result, many of today's portable PCs boast fast Intel Pentium microprocessors which nevertheless consume much less power than their predecessors.

Meanwhile, most notebook machines now come with a minimum of 8Mb of Ram, 500Mb or larger hard disks, 12-inch and sometimes ever 13-inch colour screens (virtually the same size as standard desktops) and an integrated CD-Rom drive - all in a package that weighs just over 6 lbs.

Almost all manufacturers have abandoned the market for mono screens. Higher quality 'active matrix' TFT (Thin Film Transistor) screens are gaining market share as greater manufacturing capacity, higher yields and increased competition help erode the price premium over 'passive' STN (Super Twisted Nematic) screens.

For those users who do use their machines away from power sockets for extended periods of time, longer-life Lithium Ion batteries now provide considerably more power than earlier Nickel Hydride technology, while weighing much less. Similarly, the universal acceptance of the PC-Card (previously called PCMCIA cards) standard, for adding peripheral devices such as modems, has also made mobile computing much easier – and less cumbersome.

Most portable machines now have two PC-card slots capable of taking the credit card-sized devices. As the demand increases for 'connectivity on the move', the market for PC-card modems, network adapters and wireless data cards is expanding rapidly.

For those with limited computing needs and deep pockets, the latest generation of wireless digital personal assistants – devices which combine the features of a digital telephone and a high powered electronic organiser – are attractive.

The marriage of handheld PCs and wireless telephony – in new devices from Nokia, Hewlett Packard and Motorola, as well as add-on enhancements to existing hand-held machines such as the Psion 3a and HP 100LX – has helped re-ignite interest in the pocket-sized computing market, following disappointment with first generation PDAs such as early Apple Newton's which lacked wireless communications facilities.

For example the GSM-based Nokia 9,000 enables the user to send and receive e-mail and cruise the World Wide Web, as well as make standard phone calls – all from a single (large) pocket-sized device. But it comes with a hefty £999 price tag.

"PDAs, growing rapidly from a small base, will continue to be a success in niche markets, but they will need improvement before they become the mighty industry predicted at their introduction," says Frost & Sullivan.

For the moment, notebook and smaller sub-notebook machines are expected to account for the vast majority of world mobile computing market revenues – and continue to make steady inroads into the desktop market.

■ Systems security and support • By Paul Taylor

Contingency plans are vital

Effective data management systems, back-up procedures and disaster recovery plans are not a luxury; they are an essential part of doing business in the information age

Computer "hacking" and virus attacks are on the increase while armed thieves and "Ram-raiders" have helped turn chip theft into a multi-billion-dollar worldwide industry. Meanwhile, equipment failures, accidents and the unexpected can pose a threat to the very survival of businesses.

Corporate computer systems, networks and database information in particular have become important business tools, but dependence on computing power carries inevitable risks.

Terrorist incidents such as the bomb attacks in London Docklands in February and in Manchester in June serve as tragic reminders of the need to develop adequate contingency plans.

In the wake of the resumption of IRA bombing activity, nearly one-in-four city firms surveyed by Guardian Computer Services in conjunction with Computer Weekly magazine had adjusted their disaster recovery plans. The survey, published in August, also revealed that an overwhelming 77 per cent predicted that their investment in disaster recovery systems will increase over the next two years.

The need for disaster recovery plans is highlighted by a recent study by Coopers & Lybrand, the accountancy firm, which reported that more than 60 per cent of large UK organisations have suffered a serious control failure with a computer system during the past two years. And a Loughborough University study revealed that 70 per cent of businesses that suffer computer failure of one kind or another will be out of business within 18 months.

Computer equipment failures and power failures are the most common cause of physical computer system problems, according to the latest Information Security Breaches Study by the Manchester-based National Computing Centre.

Local area network, and wide area network failures in particular, appear to be on the increase and there is evidence that downtime increases as the size and complexity of networks grow.

The shift from mainframe-based computing towards distributed computing and client-server systems also has important repercussions for the integrity and security of corporate data. Some surveys suggest that between 60 and 90 per cent of corporate data now resides outside the traditional data centre on Unix and other data processing platforms.

While it is relatively easy to ensure the integrity of a mainframe data centre and that it is backed-up effectively, it is much more difficult to devise effective back-up processes for distributed systems.

Even where the back-up processes are properly defined, security consultants suggest they are often poorly implemented. For example, back-up tapes are stored at the same location as the original data. If there is a fire or other disaster which destroys the computing equipment on a site, the back-up data is lost with the original copy of the information.

Such surveys confirm anecdotal evidence from computer users, data recovery specialists and consultants whose experience suggest that despite the risks, many companies still have inadequate back-up procedures.

For example, a recent study by accountancy firm Ernst & Young revealed that although IT security was a big concern for managements in Britain, more than a third had no security policy. Another study by KPMG Peat Marwick, UK accountants, showed that 98 per cent of organisations in the UK and Ireland have failed to implement the BS 7799 "Code of Practice for Information Security management" which was published last year.

Mr Michael Bacon, director of information security services at KPMG, commenting on the findings a few months ago, said: "Given the value to organisations of both computer equipment and data, it is extremely disturbing that such a large number have failed to implement these basic security requirements."

The scale of the security risk is daunting. In Britain alone, thefts of chips are estimated to have cost British industry £1bn last year, with insurance claims approaching £200m. The largest single incident of any type recorded by the National Computing Centre involved a theft which cost £750,000.

But the cost of replacing stolen hardware often represents only a fraction of the cost of lost data and software. Similarly, while physical computer crime steals most of the headlines, computer crime also encompasses other activities such as hacking and virus attacks. In the US, an estimated \$2.7bn was lost to computer virus infection in 1994 alone. The growth of networking and the Internet is raising the stakes.

"Computer crime is now rife and spreading at epidemic levels," claimed the organisers of Infosec 96, the UK's first big IT security exhibition, which was held in London earlier this year.

In Britain, four out of five organisations have suffered an IT security breach, according to data prepared by Ernst & Young and the Department of Trade and Industry. Experts in the IT security sector estimate that breaches cost UK companies more than £1.2bn a year with incidents rising at 12 per cent a year.

"It is becoming more and more difficult to keep unwanted 'visitors' out of computer networks," says Peter Hill, director of Index PEP, one of CSC Index's research arms.

There are an estimated 8,500 computer viruses in circulation, with between 150 and 200 new viruses being written each month. In North America, a report on computer viruses conducted by the US-based National Computer Security Association, suggests computer viruses will cost North American businesses between \$5bn and \$6bn this year. The NCSA study, which involved 300 large organisations, discovered that 98 per cent had experienced computer virus attacks.

Fortunes at stake: 'firewall' security software and anti-virus programs have become crucial in helping to protect the financial sector from external hackers and virus attacks

The losses stemmed from costs related to finding and eliminating these viruses, as well as computer down-time. At least half of the increase in losses was caused by the new macro viruses which are spreading faster than any other type of virus because they can travel by e-mail and can prove difficult to detect because most users do not scan documents for viruses.

Specialist "firewall" software and anti-virus programs have been developed specifically to help protect companies from hackers and virus attacks. Indeed, the growth of the Internet, internal corporate intranets, and concerns about security have fuelled a surge in the nascent commercial firewall software market.

"At the same time that security has become arguably the hottest Internet topic, the firewall market has emerged as a way to address this urgent concern," says a report published by International Data Corporation, the market research firm.

"IDC expects that this combination of significant demand and market emergence will prove a powerful one, fuelling exponential growth in worldwide unit shipments (of firewall products) from 10,000 in 1995 to 1.5m in 2,000."

But although a growing number of companies are beginning to use more sophisticated mechanisms such as firewalls in an effort to keep their systems secure, Mr Hill notes: "Even the most modern security may not be effective for long, while technology advances further". Firewall security and anti-virus software are also powerless against attacks from within, and most studies suggest that about 60 per cent of computer abuse is caused by insiders.

Catastrophes, man-made or natural, provide a powerful marketing tool for the disaster recovery companies in the business of providing 24-hour back-up facilities and services such as off-site tape silos capable of storing vast quantities of data.

What these companies stress is that effective data management systems, back-up procedures and disaster recovery plans are not a luxury; they are an essential part of doing business in the information age.

■ Data encryption • By Philip Manchester

Anomalies across international borders

Encryption will be widely adopted to protect financial transactions, despite national security concerns

The increasing use of global computer networks for commerce re-emphasises a long-running controversy: how to resolve the problem of data encryption. On one hand, companies and individuals, quite justifiably, want to keep their transactions private; on the other hand government authorities, again quite justifiably, are unhappy about possible misuse of encryption by criminals or subversives.

The connection between computer systems and cryptography – the science of data encryption – goes right back to the beginnings of the computer age. Indeed, one of the first computers in the world – the Colossus – was built during the second world war to help crack the German military's secret communications codes.

Ever since, national governments have attempted to control the use data encryption – insisting that they must have a way to monitor private transactions. In 1979, for example, Mr Robert Inman, the newly-installed head of the US's National Security Agency (NSA), warned: "Non-governmental cryptologic activity and publication poses clear risks to the national security."

As a result, data encryption software was classed as a 'weapon' and ranked alongside tanks and nuclear missiles as a 'strategic' export. It is still regarded as such by the US government, despite the obvious problems of policing the export of software over the network. Intelligence agencies such as the NSA, despite being non-committal in public, are anxious to maintain a strong hold on encryption – and de-encryption – techniques.

But, running contrary to the concerns of governments, individuals concerned with privacy and civil rights have fought against exclusive government control of encryption.

One of them caused a minor revolution in cryptography during the 1970s. Whitfield Diffie, a mathematician working at the Stanford Research Institute, conceived the idea of public key cryptography.

In place of the traditional single-key encryption that every secret agency had used, he proposed a dual-key approach which made it much simpler to encrypt data.

The problem with traditional encryption methods is that they rely upon both the sender and the receiver of an encoded message having access to the key – in itself a security problem. There is always a danger that the key will fall into the wrong hands.

Public key encryption uses two keys – a public key, available to anyone for encoding messages and a private key for decoding them. This means that anyone can encrypt a message with the public key – but only the recipient, using the private key, can decode it.

In 1977, RSA Data Security, a company founded by three scientists from the Massachusetts Institute of Technology (MIT), introduced the first public key cryptography software and obtained US patents for the technique.

Meanwhile, Phil Zimmerman, an American computer programmer and political activist set about writing his own version of public key encryption, eventually publishing his software for personal computers in 1991. Under the name 'Pretty Good Privacy' (PGP), he distributed it freely on US computer 'bulletin boards' and inevitably, it found its way on to the Internet and became available internationally.

The arrival of PGP fuelled

Continued on next page

■ Remote access • By George Black

Logging on from afar

As the market grows, remote access systems are becoming faster and easier to use

The huge increase in the number of mobile and home workers has made remote access systems one of the fastest-growing sectors of information technology. It has become more common for people to work where it suits them, using laptop computers connected by modems to the telephone lines to keep in contact with their offices.

ISDN (Integrated Services Digital Network) is starting to replace modems and is being heavily promoted by vendors for its superior performance and security.

A network manager seeking to enable staff to access corporate client/server systems from anywhere they like will probably need new software at both the client and server ends and possibly new hardware at the server end. The market for server-based remote access systems grew 262 per cent last year, according to International Data Corporation. IDC's research analyst Mr Camiel Camps says this was because systems began to be installed company-wide, particularly for access to the Internet.

The market is now being spurred by the development of remote node concentrators, devices which can greatly ease the implementation of company-wide remote access. At the client end, the growth rate is a healthy 30 per cent a year. This part of the market is dominated by Symantec's pcAnywhere which has around a 60 per cent market share.

Client access products, of which there are many, are usually very cheap and can be used on computers with little memory, but are often limited in their functionality, and especially security.

At the server end, many combined hardware and software systems are supplied by the leading network systems vendors such as 3Com, Bay Networks and Cisco. These are still relatively cheap and more flexible, but still may not provide all the functionality that is needed. Some may need to be augmented with other software packages, particularly groupware such as Lotus Notes or Internet software from companies such as Netmanage and Quarterdeck.

The more sophisticated and expensive systems, such as those sold by Shiva, are mainly proprietary, according to Ms Marina Smith, senior analyst with the Datapro consultancy. But she says the market is moving rapidly towards more standard solutions.

Many pitfalls

There are numerous pitfalls for buyers. One is the incompatibility of equipment, notably some access servers with some modems. Another is the lack of expertise among resellers, especially with ISDN.

According to Mr Simon Robinson, marketing manager for network software supplier Attachmate, many basic packages fall down when put under pressure. "They may be enough for a few users, but they do not scale up to hundreds or thousands of users, they do not provide security and they become unmanageable," he says.

In the past few years, remote access systems have been getting easier to use as well as performing faster and more reliably. Many users do not want to have to understand anything about the technology, and with some of the latest products they do not have to. Some are designed so that a sales person can load up the software in a hotel room and start to use the system in just a few minutes.

Users can get faster updates to their files by receiving only the parts which have been changed since the last contact, instead of the whole file. This is one of the secrets of success for remote access and can allow downloading of the information needed in a few minutes instead of hours.

Mr Christopher Colisi, vice-president of Symantec's communications products division, says many of the benefits of the latest software will come to users when they upgrade to the Microsoft Windows 95 or NT (New Technology) operating system. Performance of the 32-bit version of pcAnywhere is 25 per cent faster than its 16-bit predecessor, says Colisi. It has been modified to cope with Internet access and deploys Microsoft's OLE (Object Linking and Embedding) object software to improve ease-of-use and reduce the amount of training which users need from network managers.

Users now have a choice between using the in-built remote access facilities of Windows 95 or NT, adding NetWare Connect to their Novell NetWare network operating system or taking on a specialised software package which may have more features such as security. Those who are particularly concerned about who may be getting into their networks and looking at their data may well prefer Windows NT to Windows 95 for its superior security.

Prices of remote access software products vary greatly, from as little as £50 to several thousand pounds. Buyers should start by deciding what volume of data they need to access and how fast they need to do so, advises Mr John Birbeck, managing director of the remote access division of Bay Networks. Simpler systems can be sufficient to deliver small amounts of data at relatively low speed, up to a limit of around 20,000 bits per second. If the requirement is only to pick up a few e-mail messages from time to time, then one of these packages might well cope with the task.

■ The future of fax in an era of e-mail • By John Kavanagh

Still a preference for paper

Fax remains the most popular medium for messages, although e-mail is far cheaper

The whirring and beeping of a fax machine might seem outdated in these days of PC communication, but fax has a trump card: people still prefer to get messages on paper.

This finding from new research shows that human nature is just as important to the future of fax as current developments aimed at producing faster and more versatile machines.

The survey of UK business users by fax supplier Pitney Bowes shows that two-thirds prefer to receive messages on paper rather than electronically.

Fax also scores relatively well in terms of generating a fast response from the person contacted: 48 per cent of users said the telephone got the quickest response, 38 per cent voted for fax and 8 per cent for e-mail.

These findings need to be viewed against the fact that fax is well-established, with 70m machines worldwide. Pitney Bowes says 5m new machines are installed each year and 55 per cent of users increase their use from year to year. Its survey also suggests that the real challenge from e-mail is yet to come: only 13 per cent of business computer users have Internet access, although 77 per cent are linked to internal networks.

However, anecdotal evidence suggests that there is no getting away from the appeal of paper.

"Fax fits in with the way people work," says Pitney Bowes vice-president Ms Deborah Sauer.

"People like paper, because it's transportable, you can read it on the train, you can scribble on it and fax it back. The preference for paper is also evidenced by the number of people you see printing out their e-mails. In addition, with e-mail you have to go into the system to get your messages."

Mr Lester Davis, fax product manager at NEC, agrees: "If someone sends you an e-mail attachment or file you have to retrieve it and decode it and if you print it out it still might not be an exact replica of the original, with the exact layout and other features. Fax is, in effect, remote copying, so every copy is the same."

Users also see fax as the most reliable method of delivering messages, beating even the telephone. In the Pitney Bowes survey 45 per cent of business users voted for fax as the most reliable method, with 37 per cent preferring the telephone.

Mr Davis at NEC supports this finding, too: "You can scribble a fax message and you know it will arrive immediately, but e-mail might take a day or more – and it's some time before you know if there's a problem."

However, companies are ignoring one big issue on which e-mail wins: cost. The Pitney Bowes research shows that the average annual telephone bill for big UK companies is £25m – with half coming from fax transmission.

In addition, transmission accounts for less than a third of fax costs, according to a separate US study by Davidson Consulting, which Pitney Bowes itself highlights.

Over three years, telephone charges account for 32 per cent, purchase price 14 per cent, and supplies 4 per cent – with the other 50 per cent coming from the labour costs of going to and from a machine, queuing and operating the equipment.

Ms Bauer at Pitney Bowes says better training can reduce this last cost: only 10 per cent of users had been trained. Users are ignorant of basic features such as broadcasting to several recipients, she says; instead they key the number and feed the document for each one individually.

Deborah Sauer: "Fax fits in with the way people work"

Even so, costs are a weapon now being seized on by companies in the Internet business.

The Internet service provider Uunet Pipex says delivering a 10-page document in the UK from Cambridge to London costs £27.80 by courier (overnight), 40p by fax, 38p by post (overnight) and 15p by e-mail. Sending the same document to the US costs £2 by fax, £1.56 by post but still only 15p by e-mail.

Software and services companies are now marketing various products which seek to cut costs by combining fax, PCs and telecoms. For example, Delrina, which supplies software for sending a fax directly from a PC, has now added a £200 scanner to enable users to enter drawings and other paper documents and add them to their faxes.

A few companies are going further: a new company called Jfax gives customers a personal fax number which receives incoming faxes into its computer, where they are held as e-mail attachments. The service is £8 a month, including 100 messages; after that the charge is 15p per message.

"With Jfax, faxes are sent to people rather than to particular machines," says director Mr Richard Bennett. "People can check their faxes, e-mail and voicemail from anywhere, for example by linking from a portable PC in a hotel room."

He sees the service being especially useful for people who are often away from the office or who work from home: they do not need a fax machine or a dedicated telephone line, although the onus is on them to connect to the service to see if any messages are waiting.

However, fax machine suppliers themselves are not standing still. Machines using plain paper are now taking over, and combinations of printer, copier and fax in the same device are fast appearing.

Processors are being built into top-range machines to enable suppliers to customise them: for example to enable machines to store incoming faxes in memory and transmit them to a PC used by someone dialling in from a remote site.

Last month, Pitney Bowes became the first supplier to launch a machine which can transmit at 33.6 kilobits a second, more than three times the 9.6kbits of most fax machines currently installed. This follows recent agreement on a new international telecoms standard.

The company claims that these higher speeds, plus new data compression and error correction techniques can cut those annual £12.5m fax telephone bills by up to 85 per cent.

But with all the new features, the enduring attraction of fax in the supposedly electronic office comes back to the paper it produces. As Mr Davis at NEC puts it: "Scanning and sending physical documents will be with us for a long time yet while offices are still based so much on paper."

■ Electronic whiteboards • By Nuala Moran

Latest trend in teamwork

Boards are now software driven, with shared work appearing on each team member's PC

The electronic whiteboard is emerging as the technology which will transform the personal computer, from a personal productivity tool into one which supports collaborative working. Individual work on a PC can become group work.

The original concept for the electronic whiteboard was as a free standing, or wall mounted piece of equipment which would be a direct replacement for blackboards, or whiteboards, in meeting rooms. Now it has been scaled down to a desktop peripheral which acts as a shared piece of electronic paper. And the trend is that, rather than being separate pieces of hardware, electronic whiteboards will be software elements of collaborative working packages, with the shared work appearing simultaneously on the screen of each PC.

The software approach to whiteboards was endorsed by Microsoft in its Netmeeting collaboration package, released in August this year in conjunction with version 3.0 of the company's Internet Explorer browser. The Netmeeting software supports the emerging industry standard for electronic whiteboards, which is known as T120. This means Netmeeting users can share whiteboards with users of other T120-compliant packages.

Like many of the concepts that have made computers easier to use, the electronic whiteboard was invented by Xerox, at its research centre in Palo Alto, California. The development, in the early 1990s, was inspired by research into how computers can be used by groups to work co-operatively. Richard Bruce of Xerox who led the project says: "Having five workstations networked and using the same software, won't help people to work as a team. There can be no group leader, and people tend to withdraw into their own activities, because each individual is focused on a separate screen."

On the basis of this observation, Xerox conceived its electronic whiteboard, called Liveboard, as a computer to support collaborative work and meetings. Users can write or draw directly onto the 5ft x 5ft screen, creating electronic documents that can be seen and annotated by people in the same room, or by people working on a networked Liveboard anywhere in the world. The screen images can be printed out to provide participants with an instant record of the meeting, or saved to a computer file.

Research by Xerox also pointed to a technology imbalance whereby people were spending 30-70 per cent of their time in meeting rooms that were not equipped with the technology they rely on at their desks. Liveboard overcomes this by allowing company databases, individual files and other resources to be accessed, and worked on, in the same way as on a PC.

While Liveboard has its own built-in computer, electronic whiteboards are now available as peripherals to link into any existing PC. An example of this is Softboard, from Microfield Graphics, of Beaverton, Ohio. Softboard is plugged into a PC using a standard cable and the software to operate it is loaded into the computer. Users write on Softboard with bar coded pens which are tracked by an infrared laser system. The data is sent to the PC in real time, and the corresponding image appears on the computer screen. Although screen images can be stored and retrieved, neither Softboard or Liveboard are capable of handwriting recognition – handwriting cannot be converted into computer data.

Electronic whiteboards are now becoming a key feature of videoconferencing. In September, Microfield Graphics announced it was to integrate Softboard with Picturetalk Inc's video conferencing systems. Picturetalk already provides a way for people to meet virtually, instead of physically, to share visual content on a variety of client platforms, says Joseph Salesky, CEO of Picturetalk, of Pleasanton, California. Now, with the addition of Softboard products, users can include freehand input. Prepared content such as slides and text documents can be shared, as can freehand notes and diagrams written in a meeting.

Another videoconferencing company, PictureTel, is adopting a similar approach with its GroupView projector. Images projected in a video conference at one site can be simultaneously transmitted to a remote location. During a meeting these images can be annotated, and the changes transmitted between locations.

Although they make it easier for team members in different locations to work collaboratively, Ashim Pal, senior consultant at Ovum, the IT market research consultancy, says that for the moment electronic whiteboards remain a niche product. The cost of electronic whiteboards means they can only be justified in high impact applications. (The PictureTel projector, for example, has a UK list price of just over £8,000).

One example of appropriate use would be if design teams in remote locations worked together to discuss how one change to a design interacts with another. In this case the cost would be justified by reduced time to market, says Mr Pal.

He believes whiteboards will come into widespread use as a software element of videoconferencing packages. For the present, rather than writing freehand, users will rely on PC drawing tools to make screen inputs during the videoconference, but in future it should be possible to make inputs using a laser pen on the screen of the PC.

Indeed, there is evidence that in desktop videoconferencing, users may find the whiteboard more useful than the video element according to Greg Craven, Business Development Manager of Videolabs Inc. The company's desktop video and audio conferencing system includes the CU-SeeMe whiteboard software from White Pine Software Inc, enabling users to share graphics and data. If you are working with people you know it is more important to hear them, and share screens with them, than it is to be eyeball to eyeball, says Mr Craven.

This is particularly true of videoconferencing over the Internet, where the limited capacity of much of the communications network makes video transmission too slow to be useful in business applications. "Most users of our videoconferencing systems are finding they use the electronic whiteboard more than they expected to," says Mr Craven.

Data encryption anomalies

Continued from page 5

the encryption controversy even further – leading to widespread paranoia among government agencies, both in the US and elsewhere. Zimmerman has been vilified both by the security agencies – which see his work as dangerous – and by RSA Data Security, which sees PGP as a threat to its commercial interests.

Despite this, government attitudes to encryption vary.

"There are three different approaches," says Mr Neil Barrett, a senior consultant from Bull Information Systems who specialises in security. "The US model sees cryptography as tradeable goods and, at least within its borders, it is not primarily aimed at controlling use. The US is fairly relaxed about citizens using security within its borders.

"By contrast, the French model does not allow encryption. If you want to send encrypted messages over the French PTT lines, you must have a licence, which is very difficult to get. Only banks and credit card companies and one or two exceptions have a licence."

Mr Barrett goes on to describe the third – and perhaps the most interesting – approach as adopted in Britain: "The UK's approach is relatively free and easy. I think there is a feeling that the UK's long history of success in code-cracking makes the security services confident about being able to break through any encryption scheme. In addition, the criminal law enforces the rights of government agencies. If they want to decode encrypted data, they can insist that the key is surrendered – otherwise the individual is in contempt of court."

In his recent book, *The State of the Cybernation*, Mr Barrett examines these issues in greater detail and concludes that the use of data encryption will become more widespread – especially as companies use the network for financial transactions.

The different approaches of national governments obviously causes problems: companies and individuals wanting to encrypt data and send it across national borders must somehow cope with the anomalies.

Commercial software suppliers have pressed ahead with the introduction of encryption techniques, mostly based on public key cryptography. Netscape, the top 'browser' software supplier for example has recently extended the Secure Sockets Layer (SSL) encryption scheme for Internet communications to use a 56 character key to increase data security and Microsoft has introduced the Private Communications Technology (PCT) protocol.

The most important step, however, has come from outside the software industry. Credit card companies Visa and Mastercard have devised the Secure Electronic Transaction (SET) standard for commercial transaction on the Internet. Now widely supported, SET uses public key cryptography to safeguard credit card transactions over the Internet.

"Although it is still early days, it seems likely that SET will be the way things go on the Internet. It has already gained a lot of support both from financial organisations and software suppliers. In the long-term, it will be what brings confidence to commercial users of the Internet," says Mr Barrett.

■ **Printing on demand** • By Paul Taylor

Publish and be better off

Digital technology means business documents are now cheaper to reproduce

The arrival of digital printing-on-demand is changing the nature and economics of the publishing business.

New machines from Xerox and its arch-rival, Kodak, remove the need for complex and difficult pre-press work and create, capture, store and distribute documents digitally. Typically, offset printing is a multi-step process involving creating, making ready, collating, finishing, storing and distributing a document. Digital on-demand printing, by contrast, is a single process.

Its advocates claim that on-demand printing means a company needs only print the copies it actually requires, when it requires them. It is more cost effective than traditional offset printing for shorter runs of up to about 1,000 copies – which currently account for around 10 per cent of all print jobs. In fact, print costs are estimated to represent just 6 per cent of total production publishing costs, the "hidden bulk" includes manpower, inventories and waste.

Crucially, Mr Pierre Danon, senior vice president of Xerox's document production systems, says on-demand printing means that only the copies required for immediate use are printed. That eliminates the need for expensive storage and warehousing – which can cost four times as much as printing itself.

Conventional printing has a minimum run of around 250. This means that if actual demand is for fewer copies, some will remain unsold. "In many ways, digital printing takes the risk out of publishing and speeds up cash flow," says one printing company that has adopted digital on-demand printing. "We recently digitally produced a highly specialised book for a customer whose potential sales barely stretched to 100."

In the language of the industry, digital on-demand printing means "no more dead horses in the warehouse".

New printing-on-demand machines also highlight the move towards more cost effective integrated multi-functional digital devices. For example, Xerox's DocuTech Production Publisher series of machines, first introduced six years ago, integrate scanning, network input, digital processing, printing and on-line finishing capabilities into a single machine.

Due to be announced in January, 1997: Konica's 51 pages-a-minute digital photocopier. This high-speed model, the 7050, is for networks or standalone computer systems

Using dial-up modem lines, satellite up-links, Internet access and advanced networking functionality, users can also distribute and print the right document in the right place at the right time.

The latest machines can also produce a print run of just a single copy. This means personalised books can be produced and single-issue textbooks, journals, course packs and papers have become a reality. Xerox argues that custom document publishing enhances the customer relationship and provides increased customer value.

Documentation can be customised by product series and model, and produced and packaged on the spot, eliminating inventory and wastage.

Personalised patient information can be immediately published for clinic, hospital and doctor, eliminating the paper-record mountains typical of most medical facilities.

Overall, Xerox estimates that the number of "digital pages" published will increase at a compound annual growth rate of 29 per cent from 78bn last year to 216bn by 1999 and that digital printing will account for almost 30 per cent of overall production pages, compared with around 12 per cent in 1995. "As the concepts of print-for-one and distribute-and-print proliferate, the number of pages eligible for digital printing will increase," says Xerox.

■ **Case study: on-demand printing** • By Paul Taylor

Panasonic reduces manual labour

Panasonic's television manufacturing facility in Cardiff, Wales, claims it has significantly cut costs by switching its print production from commercial printers to facilities managed on-site using Xerox's DocuTech on-demand printing equipment.

The company says it has made savings of £50,000 a year by reducing wastage and that production lead times have been cut from 12 weeks to just two days.

As for many other companies, manuals are an important part of Panasonic's manufacturing process and have to be booked into the manufacturing resource planning (MRP) schedule well ahead of production. The Cardiff factory manufactures televisions and microwave ovens for European markets and is a prime example of how to join document production seamlessly into manufacturing.

The company produces 50 different standard models that can vary widely in specification from market to market. A model run can be from a minimum of 500 units up to 10,000, with a typical life cycle of two years.

Each TV set leaves the factory with a registration document, guarantee card and a user-manual that has been translated into various European languages. The documentation has to be produced on time – otherwise the whole manufacturing process would be held up.

Before introducing its in-house on-demand publishing system, Panasonic contracted the work out. "We used up to four commercial printers to produce the manuals, which were printed in black and white on semi-glossy paper stock. To co-ordinate its outside print source, the company generated a full TV set production forecast and then a three-month MRP schedule that the printer had to adhere to. Typical lead times were 12 weeks," says Mike Palfrey, Panasonic's senior technical buyer. Inevitably, the number of televisions coming off the production line differs from the forecast. In addition, the use of outside printers made it difficult for Panasonic to update documentation quickly and the lack of flexibility meant Panasonic had to dispose of out-of-date manuals, worth about £30,000 each year.

To overcome these limitations, Panasonic has installed a Rank Xerox DocuTech digital publishing system. "By switching to an in-house digital print system, we have print capacity which is flexible enough to meet future demand," says Mr Palfrey.

■ **Document management** • By George Black

Opening new doors

Boosted by the spread of intranets, document management systems give wider access to business information

Document management is starting to become recognised as an essential component of modern office technology. With imaging, workflow and groupware systems, it promises to make available a much wider range of data to many more people. At the same time it will replace old bureaucratic ways of working with more modern, quicker and easier electronic ones.

Playing the role of corporate librarian, document management systems take charge of text and graphics produced by word-processing software and spreadsheets. They will be increasingly able to handle audio and video components. Overshadowed by groupware in the past few years, document management has only recently become recognised as an technology in its own right.

Before, it was seen as either a specialised system for heavy data processing jobs such as insurance claims, or as an aid to desktop publishing for in-house generated brochures and the like. Law firms, being document-driven, were keen

> Document management is by no means yet a clearly defined market

early adopters, but they were not followed by a rush of others.

Now document management software is being taken up by a much wider market. It may be used instead of or in addition to a corporate groupware system such as Lotus Notes, which offers only limited document management facilities.

"It is starting to become a part of the mainstream, though it is not quite there yet," says Ms Joanne Bonnett, Filenet's marketing programme manager for the Saros document management product.

The sector is growing at 50 per cent a year and will reach $1.2bn this year, according to research from CAP Ventures. "The market is moving into higher gear," commented Mr Bill Zoellick, its research director. All recent research on the technology points to it being poised for rapid growth.

One example of its spreading popularity is Royal Dutch Shell, which recently took a worldwide licence for 42,000 users of the Saros software.

Another user is Abbey National, which has bought Interleaf software to enable it to transmit documents to 16,000 users in its branches across the UK by satellite broadcast. The bank aims to save £1.7m in the first year of running the system and to re-coup the total cost of its investment within three years. A third user is Ford Motors, which is using Documentum software to distribute information to its customers and dealers.

Interest in document management has been increasing largely because of the Internet, says Mr Alan Jeffries, European marketing director for Interleaf. "It has made many more people aware of the volume of information which is available and which needs managing electronically," he says.

Mr John Newton, co-founder of Documentum and its vice-president of European marketing, agrees, adding: "It is the spread of intranets (corporate networks modelled on the Internet) which is now driving growth in the market."

Managers are also realising that vast amounts of computerised information are held by staff outside corporate databases and beyond any form of control. This may include financial plans, price lists, bid documents, technical drawings, contracts, company standards and policies and other information essential for the business.

"If the person who created the document does not turn up for work or the machine on which it was held fails and there is no copy, there is a crisis," says Filenet's Ms Bonnett. "Document management allows companies to overcome that situation."

It is by no means yet a clearly defined market. Many companies operating in other parts of the software market have, or would like to have, a presence in document management. This is clear from the number of mergers and acquisitions which have taken place.

The workflow and imaging systems vendor Filenet bought Saros; the network operating system company Novell bought SoftSolutions; the database vendor Informix bought Illustra. Potentially important new alliances were formed by OpenText with Odesta and CP Software Group with Uniplex. Documentum appears to be the market leader in terms of the power of its product, according to research group Ovum's evaluation, but research from Delphi puts Interleaf first in market share with 20 per cent, followed by PC Docs and IDI with 12 per cent each.

Most systems run in a client/server structure, with the user on a client machine requesting a document and the server searching for and delivering it. Increasingly the server employs 'object' software techniques to ease the re-use of existing software.

Prices range from about £50 per user to about £500, depending on the scope of the functions; buyers have first to decide exactly what they may want to do with it.

Ovum warns that prices for more complex products are unlikely to fall in the next few years, as vendors will be increasingly squeezed by freeware or bundled document handling functions from operating systems and database suppliers. This will prevent the specialists from gaining the mass sales which could produce those lower prices, says Ovum.

Lack of standards is probably the biggest snag at present. Users cannot rely on the compatibility of different products, and standards could greatly increase the use of the technology.

ODMA (the Open Document Management API, or Application Programming Interface) is becoming a more significant force, while the Document Management Alliance's specification may eventually be able to make communication between document management systems as routine as between e-mail systems.

However, at present it is the Internet which appears to have the most potential to impose standards on competing producers.

■ **Database management systems**

The goal posts have moved

Influenced by the Internet, the role of the company database is changing, writes **Philip Manchester**

For the last twenty years, database management systems have maintained so-called 'structured' data – customer account codes, sales figures, outstanding balances and so on. But now company databases are increasingly called upon to cope with unstructured data – text files, images and multimedia data.

New concepts such as document management and data warehousing are also changing the uses to which data is put. And the growth of Internet-based systems has altered the way data is viewed. The flat 'hypertext' model used on the World-Wide Web is replacing the conventional view of data as a strict hierarchy where, say, a customer account is stored at the top of a pyramid with orders and invoices beneath.

Inevitably, these changes demand new ways of storing and accessing data. US researcher Meta Group, for example, points out that the traditional division between so-called operational data – orders, invoices and so on – and data for decision-making, such as sales trends and buying patterns, is disappearing.

"While most users are experimenting with this hybrid application form, 1998/99, decisional applications will be a primary means of achieving competitive business advantage through IT," Meta Group notes.

Established database software suppliers, are faced, therefore, with the problem of combining traditional methods of storing and accessing data with more modern approaches. Oracle, the market leader, has set out to achieve this with extensions to its established relational data base software.

"Users are increasingly confronted with information overload and are looking for new ways of coping with data. The use of the Internet is bringing in a plethora of thematic searches, instead of simple word searches, and the traditional tabular view used in the relational database is not appropriate," explains Mr Andrew Bailey, product marketing manager at Oracle UK.

"We no longer think of ourselves as a relational database company. The tra-

Continued on facing page

■ **Call centres** • By Michael Dempsey

Phone services transformed

Traditional telephone systems are enhanced with smart software

Call centres have entered the public consciousness through the explosion in direct selling operations over the phone. The IT industry was quick to claim credit for the successful debut of UK companies like First Direct, a Midland Bank owned telephone financial services operation, or the Direct Line insurance service.

Direct Line sold motor insurance directly over the phone and then rapidly expanded into broader financial products. The downward spiral in the price of computer processing power had freed these organisations of the need for a huge staff sifting through paperwork, so the IT sector argument ran.

It was true that neither of these operations would have taken-off without comparatively cheap hardware, using reliable software to turn over the data generated by mass contact with the general public.

But until recently, the more obvious intervention of technology, ordering the management of incoming calls and drawing down information from computer databases to boost the telephone operators sales stance, has been ignored.

Suddenly, the economic potential of harnessing smart software to the old-fashioned telephone exchange has dawned on companies across the globe. One sure sign of the call centre's enhanced status is the new title bestowed on staff who answer the phone. Increasingly these are called agents, rather than operators.

The US Direct Marketing Association reckons $599bn worth of goods and services will change hands due to telephone transactions in the US every year by 2000. It is easy to see how business of this magnitude deserves new job titles. Add case study to this introduction.

In the UK, when National Westminster Bank relocated part of its operations from London to Harrogate in Yorkshire, it exploited a favourable differential in property prices. Leaving the City of London reduced rental from £60 a sq ft to £7. At the same time, it took the opportunity to beef up the technology behind Bankline, its desktop banking service for corporate customers. Bankline allows corporates to conduct their accounts remotely, specifying payment details over the phone.

Some 27,000 companies use the service, but the individual who accesses the system can be a finance director or a shipping clerk, depending on approved access and the size of the customer. As with any computer-based service, the end-user has scope for queries. NatWest's Bankline help-desk takes 1,200 such calls every day. These are dealt with by 34 operators, relying on help desk software that provides a short-cut to effective advice and boosts their productivity.

Brian Haines, electronic banking services senior executive at NatWest, says the thinking behind the Harrogate Bankline installation is "minimum paper and maximum technology". NatWest has spent over £100,000 on help-desk programmes so far, and expects to pay out that much again before completing a system that should see it past the end of the decade.

Brian Haines of NatWest's electronic banking services, holds the view, "minimum paper and maximum technology"

While the bank anticipates Bankline tripling its customer base to 75,000, Mr Haines insists the help desk will not grow beyond 50 staff.

So, tools that multiply the power of the individual are at a premium. California-based software house Inference deals in what UK managing director Philip Padfield calls "a platform for knowledge". The $30m Inference sells software that encapsulates the day-to-day processes of the customers' business. Buying a copy of this programme, known as case-based reasoning software, is just the start of putting your platform into place. Mr Padfield is quick to stress that buying a programme from Inference does not mean taking on a huge technical burden. "Your own people act as authors for the system, but it's not quite as onerous as it sounds. You are not writing the software in code. You create an application by pointing and clicking."

He claims that Inference can take staff from an operation such as a help-desk and train them to be "knowledge authors" in a couple of days – "Inference worked with NatWest to create a help-centre where one click on the generic problem, such a pointing the mouse to a graphic for modems, produces a screen of guidance for the Harrogate phoneline staff".

Bankline is currently expanding from a base of cash management services to an ambitious offering of payment, treasury and international management electronic banking. The help-desk relies on Inference to meet its target of "one call only" resolution of problems.

Many of the calls fielded by Harrogate fall into a category of inquiry known to all IT suppliers as "read the manual" or RTM. These calls represent the expectation of average users who have better things to do than wade through manuals and assume the service-provider can sort out their problem in the space of a phone call.

By inserting software that gives its own staff an instant entry into the bank's own best practice, NatWest is keeping abreast of the customer's needs. Electronic banking for domestic customers has received a lot of publicity, but at Harrogate one large institution is applying the lessons of consumer product support to keep corporate services running smoothly.

■ **Doing away with wires** • By Michael Dempsey

Computers linked by radio waves

Wireless connections offer greater flexibility to office planners – and encourage executive e-mail addicts

The idea of dispensing with the chaos of wiring that links computer networks is very attractive. Architects have learned to design wiring ducts into new buildings, but running kilometres of cable through an old construction can be a nightmare. So "the wireless Lan" (local area network), flashing data between machines using radio waves, has an instant appeal to anyone trying to reconcile high technology with listed or ancient premises.

Not every computer network is a potential convert to wireless connections, but some networking specialists have spotted a large market in wireless technology.

Xircom is a $136m group: it has begun deploying radio technology connecting portable notebook computers to networks. In the French town of Beaujon, a hospital uses this technology for bedside patient care, doctors and nurses accessing files with a hand – held terminal. A credit-card sized insert into the spare slot normally occupied by a modem card is all it takes to let the portable PC use an infra-red frequency to link up to the larger, conventional hardwired network.

Another Xircom client is the German police force in Saxony. Investigators following up every incident, from murders to car accidents, traditionally carried 150 forms with them at any time. Now that bureaucracy in held on PC notebook: police officers download their field reports using Xircom cards.

The appeal of a wireless connection here is that officers can get on to the main network without needing an extra physical 'station' to sit at; with one access point, a PC receiving the signals, up to 12 users can download material simultaneously. But John Lindsay, a marketing manager with Xircom in Belgium, admits that this arrangement does have its drawbacks: "With a lot of users downloading at once, the process might be slow."

Multimedia applications, with a rich mix of video images, can be very taxing for radio transmission. But most wireless Lan sites want to send and access conventional files of written data. And the cost of Netwave, Xircom's wireless PC card, is low and practical. Each PC card retails at $495, with the radio interface to the main, physical network, costing $1,850.

Lindsay emphasises the robust appeal of his cards: "We have compact cards – they don't have any protruding wires, which is important for users such as the police and doctors."

The wireless business is still mostly confined to vertical markets, says Lindsay – "but it's useful to people who want to increase their productivity". He cites "the higher executive category" as a target group: main board members develop an insatiable appetite for electronic mail, according to Lindsay, and wireless local networks could allow them to read their latest messages at a glance, even in a board meeting. One very practical use of the wireless Lan, involving Xircom's cards, was demonstrated in Austria this year at the annual engineering conference of PC-maker Compaq. The company presented its entire strategy for working with third parties through 30 presenters in ten different rooms: the wireless Lan shared files between attendees' laptop PCs, and every presentation was downloaded from a central server.

The viability of wireless Lans has just been underlined by a management buy-out at Xircom. The Netwave wireless product line was purchased by Xircom's chief financial officer, Jerry Ulrich, and the US company, Technitrol.

Another US group, 3Com, turns over $2.3bn in the global data networking arena. It estimates the wireless Lan marketplace is worth $200m worldwide. But Rich Redelfs, marketing director for mobile products, says this figure should grow to $1bn by 1999 – "more and more products demand linking through radio frequencies".

But he also confirms that this demand is emerging from a select number of vertical markets such as warehousing, or retail point-of-sale systems. As Redelfs notes, a wireless connection between electronic tills and stock checking computers allows a supermarket to easily reconfigure a store without worrying about the complexity of installing new wiring.

3Com is one of 15 participants in the US Wireless Lan Alliance. WLA president Jeff Abramowitz explains how his members can recoup an investment in R&D and make a profit by selling networking cards, costing $500 - $1,000. "People think the networking card can't be big business with this kind of retail price. But if you sell a *million* of them, your investment is worthwhile. This market is growing at 53 per cent a year."

The Chicago Board of Exchange is an example of a location where a large number of itinerant dealers roam the Exchange floor and benefit from microwave links from their PCs to central processors.

Novell, the $2.8bn networking giant, which made its name writing software that keeps most office Lans up and running, has kept a weather eye on the emergence of this market. It has concentrated on sending data through a radio system employed for some mobile phones and known as Global System Mobile, or GSM.

Simon Palmer, product manager for Novell's mobile systems, says his company is exploring the use of GSM links to data networks with Sweden's Volvo Cars and national post office.

Last June, Novell demonstrated a link-up of 40 laptop PCs at an exhibition in Birmingham: the networking currency was radio ethernet – an established and proven Lan technology was "hitching a ride" on the latest way to link computers.

New directions: see page 11

■ Office software market ■ By Louise Kehoe in San Francisco

Determined to dominate

Despite innovations from Sun, Oracle and Netscape, Microsoft leads the office software market by a distance

Microsoft's influence over the market for personal computer software is so extensive that the company is often depicted as the ruler of the software world.

Last year an Internet joker even suggested that Microsoft may be reaching beyond this world to try to dominate the heavens. A widely distributed fake press release announced the company's acquisition of the Roman Catholic church.

Microsoft did not appreciate the gag, but for many in the software industry who have felt the effects of the company's growing ambitions, it hit the mark.

Microsoft is now the world leader in many segments of the PC software market. Its strengths, and biggest revenue generators, are the Windows operating system and the Office suite of business applications.

Microsoft holds an 89 per cent share of the world market for personal computer operating systems, according to Dataquest, a market research group. About 87 per cent of all PC operating systems sold this year will be Microsoft's Windows, the researchers predict, while the older MS-DOS still accounts for about two per cent of the market.

Apple Computer's Macintosh operating system comes a distant second with just over six per cent, while IBM's OS/2 has achieved a share of just over two per cent.

The picture is similar in the "suites" market for packages of office applications programs. Microsoft Office was the market leader with an 84.5 per cent market share in the second quarter of 1996, measured in revenues, according to Dataquest.

In second place was IBM Lotus' SmartSuite package with 7.8 per cent of the market. Corel, which recently acquired the Wordperfect subsidiary of Novell, has increased its share of the market rapidly, but still came in third with a 7.7 per cent share.

In spreadsheets, Microsoft's Excel had an 80 per cent market share last year. In wordprocessors, Microsoft was far and away the market leader with about 70 per cent market share. Microsoft PowerPoint leads the field with 75 per cent market share.

In contrast, Microsoft is coming from behind in the market for Internet browser software, where Nescape Communications holds sway with a greater than 80 per cent market share. However, Microsoft's plans to incorporate its browser in a future version of Windows may enable the company to leapfrog its competitors.

One PC software company that has proven to be remarkably resilient to competition from Microsoft is Intuit, publisher of Quicken, the home banking and personal finance software. Despite intense competition from Microsoft's Money program, Quicken remains the leader with a 73 per cent market share, according to PC Data, a US market research firm. Microsoft Money has a 23 per cent market share.

Both Intuit and Microsoft have launched new versions of their personal finance programs over the past few weeks and the battle is now focused on forging marketing agreements with banks. On this front, Microsoft appears to be moving ahead of Intuit.

Yet in some segments of the PC applications software market, Microsoft has only a small presence. Entertainment and games, for example, was the largest segment of the US consumer retail software market last year, representing about 19 per cent of total sales. In this category, Microsoft had only a four per cent market share, according to the company's own data.

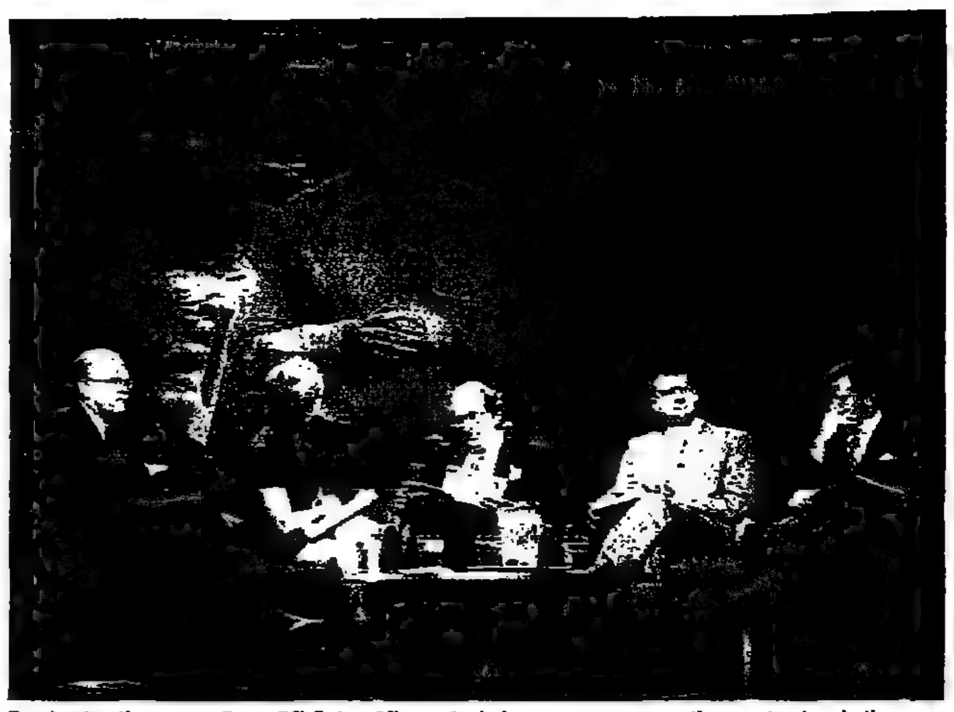
> Microsoft is gaining ground rapidly in the intranet field

Similarly in educational software, Microsoft had only a seven per cent US retail market share last year. In the "reference" category for electronic encyclopedias, dictionaries, altases and the like, Microsoft claimed a 30 per cent share of US retail sales last year.

While Microsoft continues to attack consumer markets, it is putting much of its efforts into expanding its role in the "enterprise" software sector with its Back Office suite of server products. Windows NT, Microsoft's operating system software for network servers, is the foundation of Back Office. It is gaining ground rapidly, particularly in the deployment of "intranets" office networks that adhere to the standards of the public Internet.

Can anything, or any other company stop the Microsoft behemoth? Many in the computer industry believe that Microsoft is unstoppable because it has greater resources than any of its individual competitors.

Yet Microsoft does face challenges. Sun Microsystems, the leading manufacturer of Internet servers, is capturing the attention of third party software developers with its Java programming language. On the back of Java's success, Sun has launched a range of related products that constitute a new computing 'platform' to compete with PCs running Microsoft programs.



Dominating the proceedings: Bill Gates, Microsoft chairman, towers over other contenders in the office software market. He is pictured here in a video-link with NBC interviewers in New York Reuters

Netscape Communications, which leads the market for Internet browser programs, is also on a course to clash with Microsoft. Even as Microsoft plans to incorporate a browser in a new version of Windows, Netscape is expanding the capabilities of its Internet program to compete with Windows.

Then there is the Network Computer(NC). Promoted by Larry Ellison, chairman and chief executive of Oracle, the NC is a lower-cost alternative to a PC. If network computers take off, they could pose another threat to Microsoft because they would probably deploy software developed by the company's rivals.

Microsoft is convinced, however, that the PC will remain the primary desktop computing system and chairman Mr BillGates dismisses it as a step backward in terms of technology.

For the foreseeable future, however, Microsoft's dominant role in the software industry appears secure. Competition from Netscape Communications and others seems only to have hardened Microsoft's determination to remain number one.

■ Database systems

Web's impact

Continued from facing page:

ditional relational view is just one component in a range of tools which we must give users. Other tools include ways to manage video data and things like spacial geographic information systems data. We have also built our ConText option for Oracle version 7 database to handle text."

Mr Bailey argues that companies want an integrated view of their data, no matter what the form or source: "The obvious application of this kind of technology is in managing textual data – document management. I don't see document management as a completely separate application. It is just more information –and should come under the same regime as the standard structured data."

Increasingly, the Internet and the World Wide Web are becoming part of "a data continuum", particularly when it comes to managing unstructured data, he says.

"The Internet has changed the goal posts because it is so easy to deploy information applications. We have picked up on this and our InterOffice product now uses the Web to store documents and references."

Other suppliers also see the Internet as having an important role in managing unstructured data. Document management software company Documentum, for example, has recently re-oriented its product strategy to take account of this.

"Without question, the web is the new paradigm for corporate information delivery. But even though the web is effecting the way information is distributed, customer's information requirements haven't changed," says Mr Jeffrey Miller, president of Documentum. The cost of setting up Web site as part of the corporate network can range from $60,000 to $2m and the cost of maintaining the data can be as much as $450,000 a year. He claims that these costs can be reduced by using Documentum's RightSite software. RightSite filters and assembles the data for web pages when required, thus ensuring that users are looking at the most up-to-date version.

FileNet, another document management software supplier has taken a similar approach with its Saros@Mezzanine software.

"We see that the problems of keeping Web pages up to date as crucial to successful use of the Internet and Intranet systems. The problem with classic Web links is that they are static and you must rely on some one to update it. Our software links into the live document systems so Web pages will always be up to date," explains Mr Karl Matthews, product marketing manager at FileNet UK.

He describes Saros@Mezzanine as an 'enterprise librarian' which can bring any kind of data together and distribute it through the Internet and the Web. This has implications which go far beyond simple information retrieval and the use of the Internet as an expansion to the traditional database. It could change the way companies work both internally and with each other.

"We see the Internet primarily as a communications medium. But it provides a platform for us to deliver document management and workflow applications and lets us think about expanding workflow beyond the immediate organisation," says Mr Matthews.

The traditional corporate database is now being seen as more than just a place to store data. As a result of the spread of applications, based on the Net, it is being transformed into the foundation of a completely new method of carrying out business. While it is still early days, the first building blocks of this foundation are being laid.

■ Information access • By Rod Newing

Digging deep into the data mine

The analysis of business information is becoming increasingly sophisticated as orgainisations try to make the best use of databases

As competition becomes more intense, leading organisations are increasingly trying to use their data more aggressively in order to make smarter decisions.

Most large businesses have moved beyond paper-based reports to software tools which enable users to access data directly. However, they are increasingly moving beyond queries and reports to use interactive data analysis tools, such as multi-dimensional On-Line Analytical Processors (Olap), Enterprise Information Systems (EIS), data mining, data visualisation, desktop mapping and intelligent agents.

"There is a need to act more quickly to be competitive and make better use of information in databases," says Bernard Liataud, co-founder of Business Objects *(http: //www.businessobjects.com)*, the French end-user information tool vendor. "Companies want more of their users to make more decisions, not just a few senior managers fed by analysts, so we have democratised access and reporting."

Business Objects has recently written its own Olap analysis tool and launched the most comprehensive data mining partnership scheme in the industry. "Giving users access to information is the first step, but they need to analyse it," explains Mr Liataud. "Access, analysis and reporting are part of the same workflow. Olap is the easiest tool for users and is the widely accepted first step in analysis."

Olap technology has been available for many years, but is starting to be much more widely accepted. "Oracle's purchase of the Express Olap tool was a smart move and was the major event in the market," says Mr Eric Woods, senior consultant with analysts Ovum, *(http: //www.ovum.com)*. "It has had an incredible gravitational pull and other vendors have taken similar steps, such as Informix purchasing Metacube and Seagate buying Holos."

Multi-dimensional analysis and reporting is now seen as an essential way of analysing business information, says Mr Nigel Pendse, co-author of *The OLAP Report* (Business Intelligence, ISBN 1 898 085 21 8). "There have been some extraordinary growth rates, such as Brio, trebling turnover in a year. Business Objects have rewritten their whole product to add Olap technology. Business Objects 4.0 isn't just 3.0 with extensions."

Business Objects' fiercest competitor is Cognos *(http: //www.cognos.com)*, one of the Olap pioneers, which is intending to bring data mining to the masses. "Users are recognising the need for a range of capabilities, so that they can understand information, as well as report it," says Mr Neal Hill, vice president for marketing.

"Olap is the next step after reporting, allowing users to explore their data. Data mining then acts as a software assistant which automates their analysis and helps them find hidden patterns in their data. The next logical step is forecasting, because managers want to know what the effect of a relationship could be, so we are adding that with 4Tune from Right Information Systems *(http: //www.4Thought.com)*."

Having access to information is only the first step – business users need easy-to-use analysis systems to make the data productive

New and novel visualisation techniques would follow, in order to comprehend the full impact of forecasts, including mapping, says Mr Hill. "Once you have delivered a set of tools you will want to deliver the capability in software robot form, using intelligent agents. Two years ago we predicted that by 1999 our tools will watch your internal queries and automatically get related information from the Internet, which is the ultimate information source."

It is this move to bring more leading edge tools to users which is consolidating the products. Most of them have existed for some time, being marketed by small specialist vendors.

"Chief information officers will no longer tolerate tools which are not integrated," says Elizabeth Ireland, vice president of marketing at MapInfo *(http: //www.mapinfo.com)*, the desktop mapping vendor. "We are still in the early days, but with object technology there is an opportunity for software vendors to provide integrated suites of products."

Business Objects also sees the need for close integration: "We are partnering with seven data mining vendors, but will work more closely with one, because it needs to be fully integrated as part of a single workflow for the user," says Mr Liataud.

"We are investigating new technologies, such as maps, drawings and alerts which can prompt the user for exceptions. We want to provide a universal decision-support functionality if we are to support the many types of users found in a large organisation. We have 10,000 at Shell, 8,000 at Dow Chemical and 6,000 at BT."

Seagate Software *(http: //www.seagate.com)*, whose Crystal reports is a widely used access tool, purchased the EIS, Olap and Data Mining product, Holos. "We plan to package the Holos Olap server with basic non-customisable functionality which can be given to the masses," says Greg Kerfoot, president of Seagate's Information Management Group.

"Intelligent agent technology is the most interesting," says Mr Woods. "It expands analysis and increases automation to make it easier to deal with vast amounts of data, making users more productive."

Comshare *(http: www.comshare.com)* has incorporated intelligent agents into their Commander Decision product, which already includes an Olap, EIS and data mining.

"We have created an object-oriented architecture into which these different features can be inserted, but which supplies a context for the user," says Mr Dennis Gangster, Comshare's chief technology officer. "For instance, we can insert a specific object just for sales analysis for brand managers in the consumer packaged goods industry. We are currently working with US research laboratories which are doing advanced research into data visualisation which we want to add just for users with very large databases."

Information Builders' *(http: //www.ibi.com)* Focus Six visual information suite provides a set of tools in a managed desktop, which includes reporting, Olap, EIS, desktop mapping, data mining and data visualisation.

"We have to support the needs of novices, knowledgeable users and analysts," says Michael Corcoran, director of marketing. "The tool which can provide the most complete solution to data analysis is the tool which will be most widely deployed."

Obviously, users are going to need to learn how to use these new tools before they will be able to generate any competitive advantage. Cognos and IBM have founded Business Intelligence educational establishments with third parties. The information tools can also be tried out at the Informix Superstore or IBM's new Teraplex complex.

Information suites have a lot to offer to organisations who need to improve their competitiveness.

■ Software Developers' Challenge: London competition

Charity will benefit

One of Britain's oldest children's charities, the NSPCC, which protects those who may be at risk from abuse, will be the beneficiary of this year's "Software Developers' Challenge" which takes place during "SoftDev 96" at Olympia, London, later this month.

The National Society for the Protection of Children, founded 112 years ago, has requested a new human resources software programme to improve management and distribution skills at its 120 centres throughout the UK.

Competing software development teams at SoftDev, will have 24 hours to design the application to process data on the work of 1,250 NSPCC staff. The system will be used for the exchange of expertise in areas such as legal matters and fund-raising.

RHEA International, the software consultancy, based in Weybridge, will provide technical consultancy and judging for the competition.

Dr Alan Rushworth, RHEA's managing director, says: "The challenge, now in its third year, offers an exciting opportunity for developers to show off their skills – and for suppliers to display rapid development tools."

Last year, another charity – the Save the Children Fund – received a tailor-made purchase and supply software application, valued at £20,000 and developed by the challenge winner, Safe Computing.

This year's SoftDev event, being held on November 27 and 28, takes place alongside WebDev 96. The two events focus on software development for corporate systems, the Internet and the World Wide Web through a range of features which include three high-level conferences and exhibitions:

☐ The IntraDev'96, focusing on the latest technologies for intranet development.
☐ The Dynamic Systems Development Method (DSDM) RAD conference.
☐ Visual Basic user-group conference.
☐ Enterprise application development tools.

Indian Software Pavilion

A new initiative at SoftDev'96 at Olympia will be the Indian Software Pavilion, sponsored by the Financial Times. This event brings together some of India's leading software development companies.

Mr Dewang Mehta, executive director of India's National Association of Software and Services Companies, Nasscom, will give the keynote speech for a two-day seminar programme presented by Indian companies.

Mr Mehta's work includes extensive lobying with central and state governments in India – as well as overseas – on behalf of the Indian software industry which is growing at more than 50 per cent a year and where software exports have increased 20-fold in the last six years.

Revenues for India's software industry exceeded \$1.2bn in the past year and will be worth \$5bn a year by the end of the decade, says Mr Mehta.

☐ *See also today's report on India's software industry, published separately with the FT-IT Review.*
☐ *For details on the Software Developers' Challenge, call RHEA on +44 (0) 1932 830 551 (callers outside the UK delete 0, add exit code +44); for exhibition details, call Jon Howell at Interactive +44 (0) 181 541 5040.*

■ Voice recognition • By Philip Manchester

Now you're talking – the PC understands

Speech recognition software is being added to standard applications

Stephen Thompson: 'I can ad lib in the demonstrations and be confident that it will understand me'

Speech is going to be "the future of the user-interface with computers", says Ms Anne Marie Deroualt, worldwide executive for IBM's VoiceType speech recognition products.

"Development of the Internet will bring far more people in contact with computers and this will force the interface to develop. At the moment our minds are tuned to the graphical user interface but in the future we see speech as one component in a multi-mode interface," she explains.

Speech recognition has moved a long way from its rather shaky beginnings as a gimmick to the point where it is now a viable option on desktop personal computers. Only 10 years ago, speech recognition demanded the power of a massive mainframe. Now there is a growing range of products that need only a PC with a standard sound card to carry out usable speech recognition.

Ms Deroualt says IBM's VoiceType software works on a relatively standard PC with a Pentium processor. It recognises individual words as they are spoken, making it ideal for command-based applications such as navigating around an operating system. It can also be used for dictation into a standard word processing program - although pauses are required between words. IBM also has so-called continuous speech versions of the software - but like rival products from other suppliers - these are restricted to a specific context.

Now that usable speech processing is available on a PC, it is possible to add it to standard applications – rather than working as a stand-alone technology.

Ms Deroualt says IBM is keen to see the VoiceType technology become part of a wide range of applications – in much the same way that graphical user interfaces are currently used. It released a VoiceType toolkit to help resellers and other manufacturers build speech recognition into applications.

The UK software company Staffware has, for example, added VoiceType to its workflow package so that users can control their work "vocally".

"It was pretty straightforward and there was little we had to do to our software," explains Mr John Pyke, technical director at Staffware. "You can use it to instruct the program – call up files and the like. You can use it for dictation – or even to access the Internet." Mr Pyke is suitably impressed by the accuracy of the technology and notes that it has no difficulty with regional accents: "It seems to understand my cockney accent – which I suppose must be good for financial applications in the City."

Dragon Systems, a UK-based speech recognition specialist also sees the technology gaining wider application. Its DragonDictate software is now in its second generation and comes with a range of tools to help build it into applications.

"We saw that developers wanted to add their own features to the basic recognition technology. They might want to restrict the words used to fill in a field on a form, for example," says Dr Melvyn Hunt, joint managing director of Dragon Systems.

Improvements in the latest version reduce the time taken to 'train' the systems to recognise individual voices from half an hour to a few minutes. "This means you have a usable system much quicker than before with up to 80 per cent accuracy. The system will, of course, continue to improve as it learns more about an individual's voice," says Dr Hunt.

He goes on to say that the new version of DragonDictate can also recognise some continuous speech: "Numbers and post codes can be input continuously with the new version. This means, for example, you can put data into a spreadsheet much more quickly than typing."

Mr Stephen Thompson, managing director of Dragon reseller, Voice Write, says this feature is particularly attractive to financial institutions: "DragonDictate is very good for spreadsheet work. Once you are in the spreadsheet program it is only expecting zero to nine so you can speak quite naturally," he says. Voice Write has installed DragonDictate systems at Barclays and Lloyds banks as well as many smaller companies.

Mr Thompson says the technology has improved substantially: "We work with PC distributor Gateway 2000 at its London showroom in Covent Garden. When we demonstrated the first version of DragonDictate, I had to stick to a script. But it has improved so much with the new version that I can ad lib in the demonstrations and be confident that it will understand me."

Philips Speech Processing, part of the giant Philips company and pioneer of speech recognition, has also moved towards including its technology in other applications. As the first company to produce a commercial continuous speech recognition package in 1995, Philips has continued to build the range of "contexts" including various branches of medicine and legal applications.

"We have the radiology version now working in two hospitals and a growing amount of interest in areas such as banking and finance," says Mr Roger Holmes, general manager of Philips Speech Processing in the UK. "We are now promoting the use of the software with various partners to take the technology and include it in their existing applications," he continues.

Philips's systems works in a slightly different way from IBM Voice Type and DragonDictate in that it sends the continuous speech signals to a special PC server attached to a local area network.

Mr Holmes notes that for the applications it is concentrating on in the medical sector, this "batch" approach is quite acceptable – "we recognise that there is an application for immediate real time recognition. But in radiology, for example, users do not need to see the words coming up on the screen as they speak".

While the day when we will be able to use natural speech as a substitute for a keyboard and a mouse is still some way off, the first steps have been taken and progress will doubtless accelerate as speech technology gains a wider market.

Stephen Thompson at Voice Write, tel 0171 232 2030; Dragon Systems, 01243 678581; Philips, 01206 75555; Staffware, 01628 786800, (callers outside the UK delete 0, add exit code +44)

FT IT
Directions

Intranets

A four-page report on a concept that helps cut the cost of corporate computing

This "dealing desk of the future" was demonstrated last week in New York. The prototype, giving an idea of what traders will be using in the next decade, has been developed by Syntegra, the IT services and systems consultancy of BT and researchers at BT's laboratories in Martlesham in the UK. The desk of the future incorporates intranet facilities and shows how they can be developed in the global enterprise. This week the prototype is being demonstrated to the banking community in Edinburgh

■ **Cross-platform communication** • By Tom Foremski

New ways to wire up the office

Many companies are converting their networks into intranets which will help cut the cost of computing

When it comes to wiring the office, the focus has changed from simply installing local area networks (Lans), to converting existing Lans to create intranets – internal networks that help give staff access to corporate information and simplify the distribution of data within the organisation.

Intranets provide staff with connections to the Internet; they also bring the potential to lower substantially the cost of computing within organisations through developments such as network computers – simple computing devices that promise to lower annual administrative costs.

The US computer trade magazine *InfoWorld* found in a recent survey of businesses that the number of corporate intranets is growing dramatically. In a recent three-month period, 51 per cent of surveyed companies said they had built an intranet compared with about 39 per cent in an earlier survey.

"Intranet implementation is growing far more rapidly than anyone previously thought. Our last study showed that 13 per cent of our subscribers planned to implement an intranet within 12 months, but this study shows a 31 per cent jump in intranet implementation in just 3 months. This level of significant growth in such a short period of time is truly amazing," says Jim Martin, CEO of InfoWorld Publishing Company.

The *InfoWorld* survey reveals that the most popular reason for creating an intranet is to share or disseminate information within an organisation. The web browser, either Netscape Navigator or Microsoft's Internet Explorer, is becoming the standard user interface for most intranet applications, replacing proprietary software that often required special training.

Another advantage offered by intranets is that the network technology is cross platform, so that it can be used with a wide variety of different types of computers. Since large organisations often have different types of computers that could include mainframes, minicomputers, Unix systems, IBM compatible PCs and Macintosh systems, tying such diverse platforms into a coherent network has been a problem. But Internet technologies such as the hypertext mark-up language (HTML) standard for text presentation, and the TCP/IP communications protocol, allow standard web browsers to be used by virtually any computer user to access and share the same information.

Whereas on the Internet the speed of the network is a problem, most corporations have fast Ethernet Lans already in place, making it relatively easy to create an intranet.

Novell, which leads the market for Lan operating systems with its Netware products, has spotted the enormous market opportunity offered by intranets and recently introduced its IntranetWare product line.

"IntranetWare will help NetWare users extend their existing network infrastructure to the Internet and corporate intranets as they manage the transition from IPX-only network environments," says Lee Doyle, vice president of local area networks and data communications at US market research firm International Data Corporation.

"As more NetWare customers take advantage of new Internet and intranet resources, they can add capabilities without having to sacrifice their existing investment in network access and management."

Novell sees a big opportunity in helping more than 55m users of its Netware Lan software convert their existing networks to intranets.

IntranetWare includes a directory, security, routing, messaging, management, web publishing and file and print services. It adds a web server, Netscape Navigator browser, a gateway between networking protocols, a multiprotocol router for wide area networks, and support for telephony and multimedia.

Once an organisation has an intranet installed, it could take advantage of new developments such as network computers (NCs). Intel estimates that it costs an average of $8,000 a year per PC-user in administrative costs.

The idea behind NCs computers is to use an intranet to push most of the processing power deep within the network and limit the ability of users to install their own software which has a risk of virus infection.

While NCs will not replace desktop PCs, they will provide greater access to computing resources. And, costing as little as $300-$500 each, they will allow corporations to give more of their staff access to computers and corporate data.

The popularity of intranets signifies a move away from the standard client/server network model; many companies are developing custom applications that make use of intranet technologies. At the US firm Sybase, for example, intranets are used to handle changes in human resources information.

"Formerly, if a staff member was moved or someone joined the company, they would have to fill out a lot forms which were then input into the computer system several days later. Now this is done by the staff member using an electronic form via a standard web browser," says Sybase.

Other companies report that intranets allow their staff to set up their own web pages and share data on projects.

With ready access to the Net, staff can more easily research information and communicate with peers in other locations without the restrictions of proprietary Lans.

■ **Internet/intranets: software and services** • By Philip Manchester

Race is on to supply the needs of business users

The speed with which the concept of the Internet has moved from a fringe activity for enthusiasts to a serious proposition for business is staggering – even by the standards of the computer industry

It is little more than a year since terms like 'browser', 'network computer', 'World Wide Web' and 'intranet' emerged to describe entirely new concepts of computing. And yet, many companies are already planning to exploit the potential of electronic commerce and adapting conventional computer systems to take advantage of technology derived from the Internet.

The basic Internet infrastructure has, of course, been around for many years. What suddenly made it so attractive was the innovative software that has emerged from companies such as Netscape and Sun Microsystems. The new breed of so-called 'browser' software typified by Netscape's Navigator that sits on top of the World Wide Web (the Web) extension to the Internet opened up the power of computing to a wider audience. It made it easier to access complex data from a simple desktop computer.

The next stage – now beginning – is to extend this concept of easy access from simple information retrieval to conventional business data processing systems. But this demands significant enhancements to the basic Internet 'model' of computing. Security mechanisms, data protection recovery programs and reliable financial transaction systems are all needed on top of the basic Internet technology to make it viable to carry out business. Manufacturers and software suppliers are rushing to fill the gaps.

"The Internet took off because of the accessibility of Web browser software. It is an easy way to access data, independent of the computer being used. But we see it going far beyond this and becoming an extension of conventional networking," says Mr Eugene Forrester, Intranet/Internet market development manager at software company Novell.

"Companies can use their existing network infrastructure and install the browser programs to get the same easy access to their corporate knowledge-base," says Mr Forrester.

Novell's move into Internet systems – and the internal corporate intranet equivalent – is a natural extension to its well-established role as a networking software developer. Mr Forrester says that Novell's recently-launched IntraNetware software fulfils many of the criteria needed to turn the Internet into a viable platform for business computing.

"We have concentrated our efforts on disguising the complexity of the network and building a set of services to make secure business computing possible. With our GroupWise workflow product, for example, we can offer guaranteed message delivery. We are incorporating C2 level security and working with partners to fill other gaps."

While Novell takes a networking perspective, other suppliers are coming to the Internet with a different view. Database management software company Oracle sees the Web and the Internet model as a natural extension to data management and client/server computing. This applies especially when used to build an intranet - an internal corporate version of the Internet.

"The intranet presents a more compelling cost-benefit argument than client/server computing was able to deliver. Client/server is a more complicated method of distributing computer power and there are overheads that don't happen with the Internet. You don't need to upgrade desktop computers and install large amounts of software to build an Intranet," explains, Mr Rob Bruce, marketing manager at Oracle UK.

Shanker Trivedi, marketing director at Sun Microsystems which has just launched the JavaStation: 'The shift to network computing, the internet and intranets, is occuring faster than anyone thought'

The intranet offers a similar cost model to the old mainframe systems, he says. "This model has never been beaten. The problem is that mainframes are too complex and cannot cope with the demand for new services such as multimedia. But Web technology lets you span business processes in a way that you could not do before."

Predictably, Oracle is concentrating its efforts on expanding conventional database technology to help improve the data-handling features of Internet/intranet systems. Mr Bruce points out that the basic software used to build information pages for the Web can only cope with static data.

Updating a price list or a product catalogue is labour-intensive – "we can use the power of the database to deliver information dynamically. This makes it much easier to keep Web pages up to date".

Mr David Bridger, Internet server product manager at Microsoft UK, echoes Mr Bruce's comment about the static nature of standard Web pages: "You need to be able to get information from different sources and pull it together dynamically because it is an expensive business having it in a static form."

But he also says Microsoft sees potential in other areas of commercial computing with the Internet as the base technology – "collaborative working, workflow and automating business processes are all helped by Internet technology. You can build electronic communities and enhance the relationship between supplier and customer".

He goes on to describe several areas of Internet 'enhancement' on which Microsoft is working: "There is an awful lot going on. We have a number of projects under way which aim to plug the gaps in the Internet to make it suitable for electronic commerce. In addition to support for security and encryption standards, we are building a component-based transaction monitor called Viper and a message queueing system called Falcon.

"The key is to be able to integrate these components because there are so many processes you need to bring together to do financial transactions over the Internet."

It is of course still early days – both for Microsoft and its rival software suppliers. The real proof of the viability of the Internet as a mechanism for electronic commerce has yet to emerge. It seems now, however, that it is a matter of *when* – rather than if or how – this will happen.

A flexible route to network 'plumbing'

Building an effective Intranet will sometimes mean adding routers, bridges and hubs which handle the network "plumbing".

A key trend is in stackable hubs – these hubs connect and act as the connection between local area networks (Lans).

Hubs used to be complicated pieces of equipment requiring a reasonable amount of expertise to set up and manage. But this is changing as companies bring out stackable hubs that can be as simple to use as plugging in wires and running installation software. Stackable hubs are a cross between the more complex and larger chassis-based hubs and simpler standalone hubs, with some of the best features of both.

Stackable hubs are now available for all types of networks such as Ethernet, or Token Ring. And they have a small 'footprint' which makes them useful for smaller offices.

Futhermore, stackable hubs can be combined to grow with a company and allow users to expand their networks.

– Tom Foremski

■ **Groupware** • By George Black

Market swiftly brings products into line

Lotus, the groupware market leader, has been the fastest to respond to the spread of corporate intranets

The groupware market illustrates the difficulty that even the most dynamic software developers have in keeping up with the pace of technological change.

Microsoft planned its Exchange Server to topple Lotus Notes from its perch as the top product in this field. But while it was developing the software, it failed to anticipate the rise of the Internet and the spread of corporate intranets modelled on the Internet.

This year Microsoft was publicly converted to supporting the Internet, but its change of policy came too late to enable it to shape Exchange Server to overhaul Notes.

Lotus Development was quicker than Microsoft to respond to the shift in the direction of the industry. It was able to call on IBM, which took it over last year, to help fund the development of new software to meet the requirements of the Internet and intranets. So Lotus, which has dominated the market for the past six years, looks likely to be able to continue to do so for another few years.

Virtually all groupware suppliers are bringing their products in line with Internet standards. Lotus has managed to do this by introducing a program called Domino which allows users to convert Notes into an intranet. Earlier this year there was much speculation that Notes' position was threatened by intranets. All the elements of groupware appeared to be available on the Internet either as freeware or at very low cost.

However, after further comparisons of the costs of the alternative systems and the launch of Domino, the prospects for Notes have been revised in its favour.

"The intranet is excellent for publishing, but groupware beats it for collaborative working," says Mr Roger Whitehead, director of the consultancy Office Futures and author of a report on the subject published last year by Cambridge Market Intelligence.

"The groupware available on the Internet is often unreliable and getting the tools to work together to produce business applications is not easy," he says. A Xephon survey this summer showed that use of the Internet is more likely to complement Notes than replace it. "The Web absolutely does not make Notes obsolete," it summed up.

Lotus's Notes marketing manager Mr Jim Moffat regards the intranet as the "only real competition" for Notes, but believes that Domino has secured it against that threat.

He expects the majority of

Continued on next page

■ Business applications for intranets • By Rod Newing

Ease-of-use is a key factor

Intranets allow a whole range of new users access to business applications. But there are still technical problems, particularly with transactions outside the organisation

Introducing an intranet will allow organisations to extend, cost-effectively, the reach of their main packaged business applications to a whole range of new users.

Existing power users of accounting, manufacturing, distribution, sales and marketing, and human resources systems will continue to use the full desktop software, called a "fat client", supplied with their client/server systems. However, browser access to packaged business systems can be given to a wide range of casual users within and outside the organisation.

"The intranet expands the scope of the enterprise application because anybody on the network can access it," says Jim Johnson, lead architect for web services at business application vendor Dun and Bradstreet Software (*http: //www.dbsoftware.com*).

"Somebody in the human resources department would continue to use their full client, but other employees would use our Java applet (*see buzzword definitions, page one*) to update their personnel records."

Microsoft (*http://www.microsoft.com*) is already accessing SAP's R/3 financials through its intranet. It has 1,400 users of its worldwide financial system, but has written an application using its own intranet tools which has allowed a further 12,000 employees to raise requisitions and get them approved before automatically entering them into R/3. However, vendors themselves will soon be providing these tools.

Oracle (*http://www.oracle.com*), the database and application vendor, has recently announced a series of Web extensions to its packaged applications. Web Employees offloads administrative intensive work from support staff to the employees themselves, such as job application processing, raising purchase requisitions and expense reporting.

Oracle will also extend use to customers and suppliers, through secure access to parts of the intranet. Web Customers provides sales order entry, inventory and accounts receivable, allowing a customer to check product availability, place an order, drill down to the carrier to track its progress and monitor its account to check invoicing, credits and payments. Web Suppliers allows supply companies to access purchase orders, check inventory levels, payments, manufacturing schedules and view their supplier performance statistics.

> The system is intuitive, so reducing the need for costly training

These are the first tranche of 50 applications from Oracle, while SAP (*http:// www.sap-ag.de*), the leading integrated application vendor, is developing similar functionality. It is also planning employment opportunities, electronic correspondence, bank data transfer, just-in-time stock levels, plant maintenance information, product quality certificates, help calls, project progress, employee directory, ad hoc financial reports, overhead allocation activity levels and simple workflow tasks.

These extensions have a number of benefits. They reduce costs by allowing direct input of data, rather than tying up customer service and data input staff. Oracle has already reduced the internal cost of processing a purchase order from \$100 to \$15.

"We can control who is buying what and get better deals from suppliers," says Greg Harmon, Microsoft's SAP project manager.

With intranet access, information is available to partners at any time, not just during working hours.

The ease-of-use of a browser interface compared to a traditional graphical user interface is important, as it is costly to train employees and suppliers, and customers cannot be trained. Oracle refers to this situation as "switch on and use". In 1995, Silicon Graphics, the visual computing company, developed its own Pole Vault (*http: // lurch.corp.sgi.com*) technology to allow enquiries to a range of legacy business applications across its intranet.

"No training was required because of the intuitive Netscape interface," says Bob Zalusky, information technologist. "People are already familiar with the browser and only have to learn the business process. When we replaced our legacy systems with Oracle applications, the interface didn't change, no further user training was required and productivity was unaffected."

It is important to draw a distinction between Lan-based intranet access and wider Web-based access to business packages. A World Wide Web connection is not continuous because the connection ceases when a page has been sent to the browser and is only re-established when the user clicks on a link to another page. It is also subject to interruption.

"We have quite a way to go in technology development before we have serious transactions on the Web," says Ashim Pal, senior consultant with analysts Ovum (*http://www.ovum.com*). "Web technology cannot recover from an interrupted transaction, so until Web servers can handle transactions properly, this is beyond reach."

Microsoft is working to improve transaction integrity. Early in 1997 it will launch its "Viper" transaction co-ordinator to ensure that any transaction is fully posted to all application modules. Also, using its two main object technologies, the Distributed Component Object Model architecture embedded in Windows NT Server 4.0, its server operating system, and ActiveX, managed Web connections can be made without using existing protocols.

The dream of using a network computer for all software interactions is still a long way off. "The power of the Windows environment is impossible to deliver in a browser," warns Bobby Cameron, director of packaged application strategies at analysts Forrester Research (*http: //www.forrester.com*).

"The power user benefits from Windows integration for query, decision support, spreadsheet and OLE automation. The heavy duty Windows client will remain until the browser can duplicate it, which will take years. The 'thin client' doesn't exist in this context." A thin client is a

Continued on facing page

■ Case study • By Rod Newing

A quick fix

An intranet at Dixons, the consumer electronics retailer, has improved customer service and reduced costs

The rapid installation of an intranet was a priority for Mr Keith Martin-Smith, Dixon's newly-appointed PC service director for its Mastercare customer-support organisation.

"I wanted to improve service levels quickly and easily," he says. "The company already had a Wide Area Network to link our point-of-sale terminals, which was running the TCP/IP Internet networking protocol, so it was easy to connect our PCs."

Dixons is a leader in its field, with 800 outlets, including its PC World superstores. It took only two 'man weeks' to install browsers, to enable the file server with Windows NT and Microsoft Internet Information Server, and to build a two-page Web site, using Microsoft's Front Page authoring tool. The site has links to each hardware and software vendor's own external Web site.

Knowledge-base

"Overnight, I gave 200 technicians a connection to the outside world and we had everybody 'intranet capable' in four weeks," says Mr Martin-Smith.

"It didn't take massive resources and the cost was almost zero. We immediately increased our knowledge-base and the speed of our problem-solving, because we could get information and software fixes or upgrades direct from the vendor's Web sites."

Dixons Mastercare have added to the site solutions for predicted problems for new products, and the service arrangements guide for each vendor. Any technician can post solutions to a "problem" section where it becomes immediately available.

Managers draw up staffing rotas using Microsoft's Excel spreadsheet so that they can be converted to HTML, the Web format, and posted on the site. The engineers use a digital camera to record physical changes to products they support and will add video and animation of common upgrades later.

All the PC World stores are being added to the intranet. The first application will book an engineer's visit the following day. "It takes away the pain at busy peak times, such as lunchtime queues in stores," says Mr Martin-Smith.

"We are still amazing ourselves with what we can do with Front Page when designing Web pages," enthuses Mr Martin-Smith, "but we have outsourced the design of more graphical pages which will make better use of Microsoft's ActiveX technology when customers are given access to it."

Mastercare is also developing a pilot site using a beta of Merchant Server, Microsoft's electronic commerce software.

Dixon's experience is that the intranet requires very little support. "We had to develop skills quickly but our networking staff easily made the transition," says Mr Martin-Smith.

"The ease of use and integration of Microsoft products makes the cost of developing an intranet very low, because we can set it up in man weeks, not man months," he explains. "It isn't rocket science – and with good planning there is no risk to the company or its data.

"By using the intranet we have improved customer service and reduced costs simultaneously, something which is rarely achieved in any other medium. The opportunity to use the intranet is endless and we have yet to discover its full potential."

■ Groupware market

Plenty of scope for development

Continued from page 11

Notes users to adopt Domino as part of their plan for constructing an intranet.

Lotus's strategy seems to have won the approval of experts. "I think they have got it right in integrating Notes with the Internet," says Mr James Eibisch, senior analyst with the Input consultancy.

Although it is not impossible for an existing supplier (Microsoft, Novell or Oracle) or a new competitor to overtake Lotus, the probability is that Notes will retain the leadership in groupware, with a gradually reducing share of a growing market, for a considerable time ahead.

Meanwhile, Microsoft needs either a radical upgrade or a replacement of Exchange Server, says Offices Futures' Mr Whitehead. Notes gained its lead by coming into the market first, offering a wider range of features than any other vendor and succeeding with sales through the indirect channel.

It quickly won a lot of support from large organisations and other developers who adopted it as a platform for their own applications. CMI's report on the subject found that it had drawbacks: "It is a devourer of resources, both human and technical – and needs attentive supervision if response times are not to tail away." But it concluded that "Lotus Notes is the groupware product".

Lotus now claims 6.3m Notes licences, a trebling of its user base in the past year, achieved by a big price cut which IBM's chairman Mr Lou Gerstner authorised to increase market share.

The company's target is 30m users by the end of 1998, spanning not only personal computers but also IBM RS/6000 and AS/400 servers.

Viewpoint

Mr Gerstner is said to regard Notes as fundamental to IBM's future and he has therefore given Lotus plenty of scope to develop the product as it likes, while imposing a stricter business culture on the new subsidiary.

Another potential threat to Notes which has been much discussed this year comes from the Internet browser vendor, Netscape. It has been building groupware features into its Navigator browser software since its acquisition of Collabra Software last year.

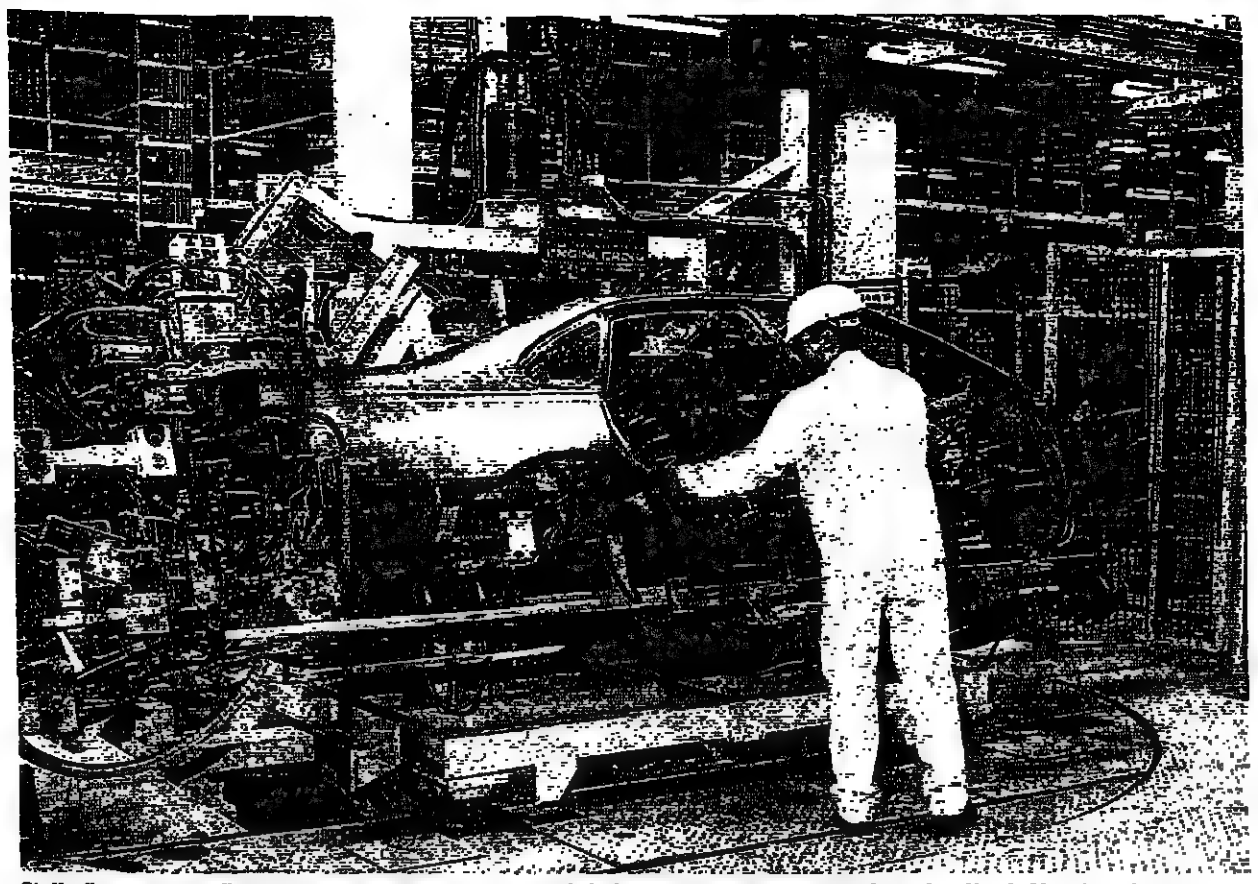
Collabra, founded by an ex-manager of Lotus's E-mail team, launched its Share groupware system in 1994. The next version of Navigator (code-named "Galileo"), due for release by the end of the year, is expected to include all the functions of Share.

Analysts have doubted whether Netscape has sufficient resources to devote to groupware at the same time as battling with Microsoft for control of the browser market. But Mr Serge Bernard, Netscape's director of European intranet market development, says that the integration of its products with Collabra's will enable it to compete with Lotus.

He believes there are many companies in which Notes is used only on a limited scale and for complex applications.

These companies will also be looking for cheaper and simpler groupware and browsers to serve many more of their staff, he says, and will therefore be keen to run Netscape programs alongside Notes.

There is certainly still plenty of scope for growth in the groupware market, if computer users can be convinced of the benefits of the software. Xephon's survey found that only 32 per cent of sites used groupware and 44 per cent had no plans to do so.



Staff, clients and suppliers no longer need powerful PCs on their desks to access corporate information: Honda Manufacturing uses Intelligent Environments' Amazon to create an intranet to link its factories with its parts suppliers

■ Database applications • By Geoffrey Nairn

Less problems for IT staff

Software houses are rushing to meet the demands of customers moving their databases on to intranets

The ease of use and low cost of web technology are powerful arguments in favour of moving database applications from existing networks to an intranet. But transforming corporate data into web pages is not straightforward and the software industry is racing to develop tools to ease the task.

Many of today's business applications, such as accounting or retail point-of-sale systems, depend on data stored in corporate databases running on mainframes or client-server systems. By building an intranet and moving these applications on to a web server, complexity and costs can be cut a stroke.

Users no longer need powerful PCs and applications programs, whose installation and support cause IT departments big headaches. Instead, they access web-based applications and corporate databases via cheap, simple-to-use browsers that run on any computer – Netscape's Navigator works on 16 different platforms, for example.

Oracle, the leader in client-server database software, takes the cost cutting further and proposes companies equip their users with $500 network computers. These cut-down systems are designed solely for browsing and thus lack the local storage and complicated features of today's PCs, so reducing their price tag and support costs. "With an intranet, the database delivery mechanism has changed. Users do not need a local 'mainframe' on their desktop or software that resides locally," says Mr Andy Bailey, Oracle marketing manager.

Silicon Graphics built an intranet to give its sales staff cheap and easy access to corporate data. "We are able to leverage our data warehouse investment and extend the reach of this information worldwide, without making a huge networking investment," says Mr Mike Graves, chief information officer for Silicon Graphics.

The US workstation company is using a new web-enabled version of the BusinessObjects decision support software, from French company Business Objects, to allow several hundred intranet users to access sales and marketing information in its data warehouse.

Many software houses are rushing to adapt their database software or tools to work over intranets. Oracle, for example, hopes to increase its dominance of the high-end Unix database market with software to allow companies to move existing client-server applications to the web or build new applications for their intranets. The company has developed its own web server technology, included free in the next release of its Oracle database. This allows users to conduct transactions on a corporate database directly from their web browser, and while the primary market is Oracle users, the company this year unveiled new "cartridge" technology to allow Oracle Web Server to integrate with non-Oracle databases.

Oracle and other leading database vendors, such as Sybase and Informix, see intranets as a natural extension for their Unix relational database technology. But they are losing ground in their traditional client-server market to Microsoft, whose Windows NT operating system and SQL Server database provide a cheaper solution.

> By building an intranet and moving applications on to a web server, costs can be cut

This trend is even stronger in intranets and a growing number of web servers use Windows NT instead of Unix. The Unix database vendors have responded with cheaper databases and intranet access products for Windows NT, but they face strong competition. Microsoft, for example, is trying to establish its BackOffice technology as a platform for corporate intranets. It has developed FrontPage to build web applications that link to a corporate database, either its SQL Server or rivals such as Oracle.

Other companies have developed similar products and many interface the database to a web server using a standard called Open DataBase Connectivity (ODBC). This is easier and quicker than developing a custom application, though critics claim the extra layer of interfacing software slows down the applications.

"There is a slight time penalty, but it all depends on the database you are are using," says Mr Randy Anderson, marketing vice president at Stormcloud Development, whose WebDBC product is an example of an ODBC-based web application development tool.

US engineering firm Bechtel uses WebDBC to allow regional managers to get the latest financial information from an Oracle database simply by clicking the appropriate region of a map on their browser. Telecoms company US West used WebDBC to write a web-based help-desk application for its support staff.

The UK company Intelligent Environments spurns the ODBC approach to accessing databases, which it claims can reduce performance and security. Its Amazon tool, which runs on Windows NT or OS/2 Warp, can directly access a wide range of corporate legacy databases and transaction processing systems. It stands out for its use of artificial intelligence to implement business rules and procedures, so allowing companies to build web applications that more closely match their business needs.

In the UK, Honda Manufacturing is using Amazon to create an intranet to link its factories to its parts suppliers. "Electronic data interchange (EDI) has not taken off really well and the web potentially can replace it," says Mr Tony Goschalk, marketing director at Intelligent Environments.

The tools to move data between databases and web pages are immature, analysts warn, and require much manual fine-tuning to work effectively. The main problem is that the two worlds are essentially incompatible. The intranet is designed to handle unstructured content – text, sound and images – accessed randomly from web pages; a relational database, by contrast, contains highly structured data organised and accessed by rows and columns.

Object technology may provide a better bridge between the two worlds. The object-oriented language Java already allows browser-based mini-applications called applets to extract their data directly from a corporate database via the intranet *(see cover story)*.

Object Design, a leading supplier of object database software, claims relational databases are simply unsuited to building intranet applications. It maintains object technology is better at handling the complex relationships between multiple data types, such as text, audio, video and image. Web sites on the Internet increasingly use a variety of types of data to present information in different ways and Object Design argues corporate intranets will soon follow.

Good news for business consultants

Continued from page 12

stripped-down PC (a low-cost NC) designed to work across networks.

However, occasional users may find that the thin client puts on weight rapidly. "In order to have value, the browser has to get bigger to support groupware," argues Mr Pal. "This means it gets larger and more like an existing client. People will find out in two years that they have the same level of complexity as a fat client."

An interesting long-term solution to these problems is IBM's San Francisco Project *(http: //www.softmall.com/sf)*. IBM has teamed up with more than 50 software developers, including Computer Associates, Dun and Bradstreet, JBA, Lawson, IBS and Marcam, to produce high level application frameworks using Java, Sun's new Internet programming language. These basic frameworks will be adapted by each vendor for its own market and configured across the network between the client and server.

The intranet looks like being good news for consultants, who can now start planning to revisit all their past business process re-engineering projects. They will soon be able to change their client's business processes *again* to make use of this new functionality! Nevertheless, the intranet does offer the opportunity to use existing applications to increase customer service while reducing costs.

■ European pacesetters • By Geoffrey Nairn

Competitive benefits

Corporate intranets have caught the European imagination

Europe has traditionally lagged behind the US in its adoption of the latest information technologies. But with corporate intranets the gap is closing rapidly as European companies warm to the benefits the technology promises over their existing networks.

"European companies are very interested in what intranets can offer and the gap in deployment between the US and Europe is fairly limited," says Mr Ashim Pal, senior consultant at Ovum, the UK-based IT consultancy firm, which plans to publish an intranet report in December.

This strong interest in intranets contrasts sharply with the lukewarm attitude of many European businesses to the public Internet. According to a survey commissioned by Digital Equipment, interest varies by country with most enthusiasm coming from UK and Scandinavian companies. Almost half the German and French companies polled believe the Internet is over-hyped, while in the UK, the sceptics are outnumbered two to one.

"Information on the Internet is mostly in English and this will always be an impediment to the Internet's growth. Intranets do not have this problem as companies can create them in their own language," says Mr Paul Evans, marketing director with Digital Equipment Europe.

As well as the language barrier, European Net surfers are handicapped by sometimes creaky infrastructure and the afternoon slowdown when North American Internet users wakes up. According to the Digital survey, 24 per cent of European businesses believe their Internet infrastructure will be used primarily to access the public Internet in 2000. Rather more, 27 per cent, predict their browsers will be pointed internally, running powerful applications and accessing corporate data on private intranets.

The figures for US businesses are 38 per cent and just 16 per cent, suggesting intranets could develop more rapidly in Europe than the US.

"Europe has realised there is a competitive advantage in using intranets and does not want to be slow off the ground," says Mr Evans. By 2000, intranets will take 80 per cent of the European market for Internet software, he predicts.

As in the US, Europeans are taking their first intranet steps with simple applications, such as information publishing and document management. Here, the technologies are relatively stable and the risk of failure limited. "If the intranet does not work with these applications then the business will still survive," says Mr Pal.

Corporate intranets enable staff working from home to access data stored on a web server via a PC and modem

The Dutch subsidiary of Cap Gemini, Europe's largest computer services group, used an intranet to eliminate the mountains of unread memos and other paper on desks. Documents are now stored on a web server and can be accessed by any employee using a standard browser. Staff working away from their office – at home or on a customer's premises – are not left out and can access the same documents on the company's intranet using a PC and modem. The Dutch project is part of a larger intranet, called Knowledge Galaxy, that links 17,000 Cap Gemini staff and runs on 40 servers distributed throughout the group. Staff can quickly find and retrieve case studies, design documents and reports regardless of location.

"If they have no idea where the information is located, they can run a simultaneous search across all 40 servers," says Mr Keith Turner, technical director at Cap Gemini's UK subsidiary. Knowledge Galaxy uses the Fulcrum document management system, which allows documents to be accessed in their original form – as a Microsoft Word file, for example. An alternative is to use a web-based search engine, such as Digital Equipment's AltaVista software, but then the information must be converted into web pages. "A lot of things, such as presentations, lose their value when converted to web pages," says Mr Turner.

Many IT vendors are building intranets to improve information flows and showcase technologies they can offer to customers. Digital Equipment, for example, has an intranet linking 1500 servers worldwide. One of the first applications to be put on it, 18 months ago, was the internal telephone directory.

Italian firm Olivetti has built an intranet to connect its research labs in Italy and abroad. It uses Netscape Communications Server software running on an Olivetti SNX server system and Microsoft Windows NT. Via the intranet, researchers can access articles, news and external Web sites, or debate topics in "discussion areas", sharing experiences and project results with colleagues.

Previously, there was no central repository of information, so researchers wasted time looking for information perhaps available in-house. The intranet has also improved research management by giving project leaders instant access to administrative data, such as man hours spent and procurement requests. "Project leaders can focus more on technical problems than on administrative issues," says Mr Claudio Adriani, Olivetti's director of technology strategies, who claims productivity has also increased.

Interest in intranets is growing beyond the IT industry.

Kvaerner, the Norwegian conglomerate, is constructing an intranet to help integrate its growing business empire. Last April, Kvaerner acquired the UK company Trafalgar House and the first stage of its intranet will link its Oslo headquarters to the new London offices.

Additional servers will later be installed in Houston, Singapore and Sydney to act as communication hubs for a global intranet linking 40,000 employees in 400 offices. "Our main goal is to achieve effective information flow throughout our operations," says Jorgen Piene, Kvaerner's technology director. The intranet servers, supplied by Digital Equipment, will run Microsoft Windows NT.

Other intranet pioneers can be found in Europe's pharmaceutical industry, where a wave of mergers has caused companies such as the UK's Glaxo Welcome to look at using the intranet to improve information distribution and collaboration between their many European sites.

Elsewhere, the clothing firm Levi Strauss has a project to link 60 per cent of its European staff using an intranet.

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11 J D Edwards (UK) Ltd

Oxford Road, Stokenchurch, High Wycombe
Buckinghamshire HP14 3AD
Tel: 01494 682700
Fax: 01494 682699

J D Edwards & Company is the industry leader in supplying application software and solutions for the IBM AS/400 market. Developed using CASE tools, J D Edwards is currently developing a new generation of software products, which will operate on a variety of platforms.
J D Edwards' fully integrated solution is for cross-industry and industry specific applications including general business, financial, manufacturing, distribution/logistics and energy and chemicals.
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JDEdwards

---

12 ICSA Software Limited

Waterman House, 41 Kingsway,
London WC2B 6TP
Tel: 0171 497 5511
Fax: 0171 497 8833

As the software company of The Institute of Chartered Secretaries and Administrators, ICSA Software provides database software, written using *Microsoft Access®*, on which to store and report on statutory company information (BLUEPRINT Company Secretary) and administer employee share option schemes (ICSA Rolls)

Hardware/Compatibility
Pentium based PC's running Windows 95/NT/3.1x operating systems and compatible networks

Applications
BLUEPRINT Company Secretary (from £1750) and ICSA Rolls (from £995)

ICSA SOFTWARE

---

13 Davies and Tate PLC

4 & 5 The Pentex Centre, Bellbrook Park,
Uckfield, East Sussex TN22 1PH
Tel: 01825 769133
Fax: 01825 769134

Administration, management and accountancy software for installation and service companies. Tracking information flow from point of contact through the supply or contract process to debtor and after sales service management with over 100 automatic reports.

Geographical coverage
Throughout the U.K.

Applications
Service installer computer software.

Davies &Tate

14-15 Have you got an eye for business?

No company can afford to ignore the power of visual communications technology.
At Professional Display Systems our aim is to bring you the finest technology, unrivalled product knowledge and a service that is second to none.
This month we'd like to focus on EIZO monitors, the standard by which all other CRT monitors are judged. Clearer, ultra reliable and built to meet the world's toughest energy saving standards, EIZO monitors are perfect for all applications.
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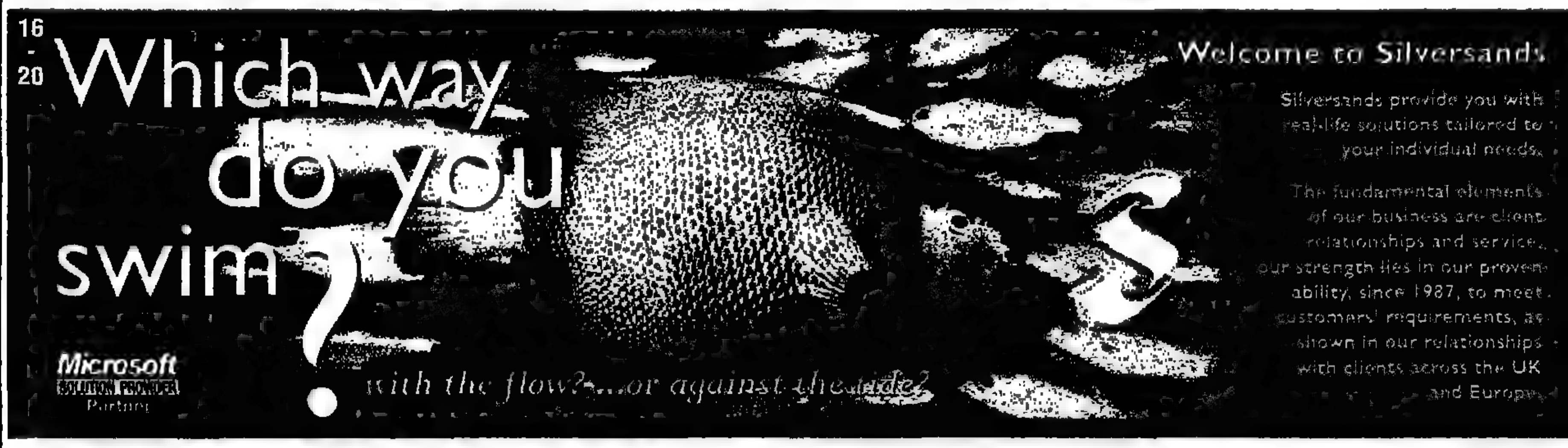
16-20



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21 Quantum Business Systems Ltd

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22 Lincoln Software Limited

Marlborough Court, Pickford Street,
Macclesfield, Cheshire SK11 6JD
Tel: 01625 616722 Fax: 01625 616780
Email: info@ipsys.co.uk
Web: http://www.ipsys.com

Lincoln Software produce a range of Meta-CASE and CASE tools for large scale three-tier client/server application development. Our Object IE product is an object oriented, full life cycle tool which includes full C++ Code Generation and Database Generation for Oracle, Sybase and Informix. Our tools bridge the gap between business requirements and IT.

Hardware/Compatibility
Open VMS/Solaris/Sun OS/HPUX/AIX/Microsoft Windows

Geographical Coverage: Worldwide

Applications
IPSYS Toolbuilder, Object IE, HOOD, SSADM

---

23 Plato Computer Services (UK) Ltd

The Hertfordshire Business Centre
Alexander Road, London Colney,
Herts AL2 1JG
Tel: 01727 822639 Fax: 01727 826688

The Year 2000 is a problem for your business critical computer systems. In the USA external auditors are already commenting on companies' annual audited accounts stating that "there is an unquantified liability relating to changes that must be made to computer systems prior to the Year 2000". The Year 2000 problem is REAL, and it will not go away. We are one of the very few companies who have practical experience of the issues. Call us now for further information on how Plato can assist in this critical situation.

Geographical Coverage:
UK & Europe

PLATO
PLATO COMPUTER SERVICES (UK) LIMITED

24-25 Parallax Group plc

Stonecourt, Siskin Drive, Coventry,
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PARALLAX GROUP

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Parallax provides:

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To discuss further details about our Web and Internet/Intranet products and services, please contact Julie Gibson on +44 (0) 1203 514400

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26 Protegrity

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Fax: (203) 921 0394 E-mail: bjornw@pobox.com
Chairman & CEO - Björn Wissén
Protegrity Ltd. Maple House, High Street, Potters Bar, Herts EN6 5BA **Phone:** (1707) 828013
Fax: (1707) 828012 E-mail: Clive_Archer@msn.com
Managing Director - Clive Archer

PROTEGRITY
PROTECTION AND INTEGRITY

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27 Elwotix Software Ltd

140 Tabernacle Street,
London EC24 4SD
Tel: 0171 251 5556

Excalibur:
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- Investment portfolio management
- Scheduling and tracking of tasks

Excalibur is a windows application designed to assist in trust and estate administration

Hardware/Compatibility
Windows 3.1, NT, 95
Apple Macintosh

Geographical Coverage
Nationwide

Application
Also available low cost will writing software

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28 Software Answers Ltd

Victoria House, Victoria Road, Farnborough,
Hampshire GU14 7PG
Tel: +44(0) 1252 376028
Fax: +44(0) 1252 376053

Software Answers develop applications that provide effective support for demand forecasting and inventory management, particularly within consumer product and pharmaceutical companies. Customers include: Grand Metropolitan, Massey Ferguson, Rhone-Poulenc Rorer

Hardware Compatibility:
PC/LAN
Geographical Coverage:
UK, Europe, N.America, Asia
Applications:
INVESTIGATOR - Demand Forecasting OPTIMISER - Inventory Management
Cost: £40 - £50k
(10 users approx)

SOFTWARE ANSWERS

29-30 DORSET SOFTWARE
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31 ADS Telemarketing

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ADS TELEMARKETING
Manchester & Bristol (January 1997)

FT-IT DIRECTORY INDEX

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1–2 SANDERSON

Tel: 0114 282 7777
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E-Mail: SeanH@Sanderson-cbt.co.uk

For Premier Computer Solutions

Sanderson is the UK's premier open systems supplier of computer solutions and related technology and networking services with 15 offices in the United Kingdom and operations in Australia, USA, New Zealand and East Asia. Sanderson has developed and owns an extensive portfolio of software packages for a wide range of industries and applications including:

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Finance and Distribution	Airports	Production Monitoring
Printing Industry	Financial Management	Insurance
Media Industry	Healthcare	Police & Security
Credit Management & Collections	Multimedia & CBT Training	Document Image Processing

Geographical Coverage: International

SANDERSON COMPUTERS

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3 Saratoga Systems Ltd

Coworth Park House, Coworth Park,
Sunninghill, Ascot, Berks SL5 7SF
Tel: 01344 875170
Fax: 01344 875171

SPS is a customised account management, sales automation and marketing, software package which distributes database information to Laptop, PC, PC Lan and Mainframe users. A powerful and flexible database, SPS can be customised to meet individual needs providing your sales team with up to date relevant information, wherever they are.

Hardware Compatibility
All PC's
Geographical Coverage
World-wide
Application
Sales Automation and Marketing Software
Cost Entry Level:System for 15 Users, £13,125

Saratoga Systems

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4 The CODA Group Plc

Cardale Park, Beckwith Head Road
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Tel: +44 (0)1423 509999
Email: Liberation@coda.demon.co.uk

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Geographical Coverage:
Worldwide
Applications:
All sectors

3Com

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7 Martec Systems Ltd

Hunters Court, 4a Hunter Street,
Chester CH1 2AR
Tel: 01244 323323
Fax: 01244 314126

Over the last 10 years Martec have built a reputation for supplying electronic document management solutions. Systems provided by Martec include: Archea document image processing, Siamoat high volume ICR, Staffware workflow, BRS Search and OCR for Forms. Martec have just launched VNS a groupware product specifically designed for document management.

Hardware:
Client Server software running on UNIX and NT with PC and Mac Clients. Access over LAN, WAN, Internet & Intranet.

Martec

8–9 Applix (UK) Limited

114 Middlesex Street, London E1 7HY
Tel: 0171 426 0915
Fax: 0171 426 0916

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10 International Business Systems

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Company Description:
IBS is a wholly owned subsidiary of IBS AB, a Swedish public company and one of the leading software suppliers with over 3000 customers *worldwide. The ASW Portfolio is a full range of* application software with a GUI interface providing innovative solutions to today's business needs; including Pan European requirements and EuroVAT acting in a true Multi currency environment.
Hardware: *AS/400 Client Server, Windows and OS/2* GUI support.
Coverage: 65 Offices in over 30 countries worldwide. See us at the Softworld Exhibition on Stand No. 518
Applications: Financials, Distribution, Inventory, Asset, Service, Production, Manufacturing, Project, Warehouse Management, EIS and FMCG.

IBS

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19 Geac Computers Limited

Hollywood Tower, Hollywood Lane, Cribbs
Causeway, Bristol BS10 7TW
Tel: 0117 9509003
Fax: 0117 9590718

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- Comprehensive MIS

Hardware: UNIX or NT, HP, IBM RS6000, SUN, Sybase, Oracle, Ingres
Geographical Coverage
UK, Europe, Far East, Australia, North America
Applications: Geac WINNAR
Cost: Priced on a per concurrent user basis

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32 Software Market & Directory Series

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London Road, Kingston, KT2 6PT
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softworld

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9 SoftDev & WebDev

27-28 November 1996, Olympia 2,
Kensington, London

SoftDev & WebDev are two highly informative events covering the key stages in the product development life cycle. SoftDev encompasses the range of products and services required for the development of corporate systems and applications. WebDev focuses on the *emerging software products and development tools for* corporate intranets, the Internet and the World Wide Web. Both events include an extensive programme of features including The Financial Times, Indian Software Development Pavilion, the Annual DSDM European Exhibition and Conference, The Intranet '96 Conference and the Third Annual Developers Challenge.
To pre-register for both events free of charge, contact Interactive Exhibitions Ltd.
Email: softworld@softinfo.com
Tel: 0181 541 4865
Fax: 0181 974 5188

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10 Softworld in Accounting & Finance

9-10 February 1997
Earls Court 2
Tel: 0181 541 4865 Fax: 0181 974 5188
Email: softworld@softinfo.com

Softworld in Accounting & Management/Executive Systems is the definitive event for senior financial and business executives looking for accounting and reporting software. Organised in association with The Financial Times and supported by The Institute of Chartered Accountants and BASDA, the event *comprises a comprehensive programme of product* demonstrations, special seminars on related topics and a highly focused exhibition, together with the industry's leading Directory of accounting applications.

softworld

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8 Softworld in Sales & Marketing

13-14 November 1996,
Wembley Exhibition Centre, London
Tel: 0181 541 4865 Fax: 0181 974 5188
E-mail: softworld@softinfo.com

Softworld in *Sales & Marketing* takes place at Wembley in a week's time. The event is to feature Network computers in a brand new Internet for Business Area. The area is specifically designed to help delegates find out more about the capabilities of the internet in a sales and marketing context. In addition, there will be live demonstrations of computer telephony integration/call centre technology. There will be two seminar sessions each day giving delegates an insight into what can be achieved through efficient customer call management. On top of this, many of the leading sales and marketing software suppliers will be giving new products their inaugural presentations *at the event. To pre-register or find out more about the* event, please contact Interactive Information Services on the number above.

softworld

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16 Enterprise

'Enterprise' is the first true 32-bit Client Server accounting system for Win95/NT, which also has an optional DOS interface, both of which have full multi-currency, open period, powerful drill-down and drill-across features.

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17–18 Druid

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Tel: 01932 571212 Fax: 01932 571552

Druid is a leading management consultancy, specialising in integrated business system solutions. We have over 200 consultants with direct business experience of a wide range of industries, combined with in-depth technical expertise in integrated business systems.

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For further information, please contact Rachel Blondeau on +44(0)1932 571212. Or you can explore our website at http: www.druid.co.uk

Geographical Coverage:
Druid has a proven track record and 100% success rate working with multi-national *blue chip companies in Europe and USA.*

DRUID

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20 Excalibur Technologies Int. Ltd

The Courtyard, New Lodge, Drift Road
Windsor, SL4 4RQ
Tel: 01344 893444 Fax: 01344 893888
www.excalib.com email: info@excalib.com

Excalibur has developed RetrievalWare, a suite of software solutions allowing users to search and retrieve information whatever its origins - databases (such as Oracle), Lotus Notes, electronic or paper formats - and wherever it is stored. With the explosion in intranets, the ability to manage information, both text and graphical, is critical.
Hardware
Client Server based software running on Unix and NT with PC and Mac clients
Coverage: Worldwide
Applications: Search and retrieval technology for intranets - covering paper and all electronic data.

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21–22 Pursuit

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23 Intrinsic Limited

Chapel Lane, Ashbury, Wiltshire, SN6 8LS
Tel: 01793 710500
Fax: 01793 710501
Email: sales@intrinsic.co.uk

A software development company providing Selection Manager, an end user marketing database application. It is used for analysis, data interpretation and the planning, executing and *monitoring of data driven communications to* customers and/or prospects
Hardware/Compatibility
Any systems that support SQL databases and ODBC connectivity
Graphical Coverage
UK
Applications
Selection Manager Client Server
Cost
Multi-user systems: £50K to £150K

Intrinsic

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24 Microtest Europe

2A Kingfisher House, Northwood Park
Gatwick Road, Crawley, RH10 2XN
Tel: 01293 894000 Fax: 01293 894008
WEB: http://www.microtest.com

Microtest Inc. is a worldwide manufacturer of cable testing (PentaScanner+) network diagnostic (COMPAS) and CD-ROM sharing products. High performance CD-ROM sharing is achieved with Microtest's DiscPort mini server, network ready towers and CD-NOW! server technology. These products enable users to simultaneously access networked CD-Changers and Jukeboxes. Support is provided for multiple client platforms and WINDOWS NT and NetWare operating systems.
Geographical Coverage:
Worldwide

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25 Mosaic Systems Ltd

17 Owen Road, Diss
IP22 3ER United Kingdom
Tel: 01379 652188
Fax: 01379 652973

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Cost: Solutions start from £2250 UK list

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26 Network SI

18/19 Pall Mall
London SW1Y 5LU
Tel: 0171 839 5219
Fax: 0171 839 1372

Network SI

Network FM, a division of Network SI Group, provides all aspects of network management and outsourcing, targeted at the desktop, including help desk, LAN administration, break-fix, systems integration and project work. It is currently providing this service to over 15,000 desktop users for major corporate clients.

Network FM offers contracted service levels to meet business needs and a delivery structure based at the customer's location or off-site.

Geographical Coverage
UK

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27 IIR Technology

2nd Floor, Market Towers
1 Nine Elms Lane, London SW8 5NQ
Tel: 0171 344 3900
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IIR Technology is the leading provider of professional IT support training world-wide. We provide intensive, practical training for people who already have a professional understanding of networks, PC's or leading edge technologies, but who need to expand their knowledge and advance their careers:
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TECHNOLOGY

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28 Intuitive Systems Ltd

Broadlands House, Primett Road,
Stevenage, Herts, SG1 3EE
Tel: 01438 317966
Fax: 01438 791677

Intuitive Systems, the sales & marketing automation specialist, has developed Sales & Marketing Workbench (a sophisticated lead tracking and contact management system) and Tele-Marketing Workbench (the tele-marketing *equivalent) which give an organisation competitive* advantage
Compatibility:
All leading word processing & spreadsheet applications
Geographical coverage:
Throughout UK, rest of Europe, USA and Asia/Pacific
Applications
Specialist in several sectors
Cost: *Around £1,000 per user*

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29 Software 2000 (UK) LTD

Crosby House, Meadowbank, Furlong Road,
Bourne End, Bucks SL8 5AJ
Tel: 01628 850850 Fax: 01628 850243
http:\www.s2k.com

Software 2000 offers a comprehensive suite of financial management, human resources and materials management software designed exclusively for the IBM AS/400 and related technologies, using client/server and object oriented technologies to provide easy-to-use icon and graphical screens and integration with popular windows spreadsheets and word processing packages and takes into account all the requirements of the national corporation. Software *2000 has over 1350 clients worldwide.*
Hardware: IBM AS/400, Server, Client/Server - OS/2, Windows NT & 95
Geographical Coverage: UK, Mainland Europe, USA, Australia, Asia, Sth Africa
Applications: Totally integrated financial management, human resources & materials management
Cost: Entry level price £25,000

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30 BAeHAL Software Ltd

Farnborough Aerospace Centre
PO Box 87, Farnborough, Hants GU14 6YU
Tel: 01252 382020
Fax: 01252 382380

Company Description
Superb communications unite the proven software skills of the Indian sub-continent with the project management expertise of British Aerospace to enable BAeHAL, an ISO 9001 software services provider, to deliver high quality, cost effective solutions to British Industry.
Hardware
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Geographical Coverage
Europe, US and Pacific Rim.
Cost
Up to 50% less than UK rates.

31–35

Configurable Industry-Focused Solutions

SAP R/3 Enabled SFA

INDUSTRIAL
CONSUMER
PHARMA
FINANCIAL

K & V are Europe's largest sales and marketing solution provider, organised by vertical market and with a rapidly growng global presence. K & V deliver state-of-the-art, open, scaleable sales and marketing solutions that are completely configurable to precisely meet the needs of our corporate Clients. Through comprehensive software and industry competence, K & V assist Clients in creating and sustaining vital competitive advantage.

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33 Blagrave Street	70 Walnut Street	Unternehmensberatung EDV
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Berkshire RG1 1PW	Tel: +1 617 239 8085	68161 Mannheim
Tel: +44 118 952 7700	Fax: +1 617 239 8001	Tel: +49 621 1255 0
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K&V
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■ Software solutions • By Rod Newing

In sales, it's grow or die

Integrated sales and marketing systems are still not being used by many businesses – and even those that do use these software packages are not receiving the full benefits

Organisations are still not realising the benefits of information technology for their sales and marketing. The latest Softworld survey for sales and marketing systems *(http: //www.softinfo.com)* shows that 81 per cent of respondents, down from an astonishing 95 per cent a year earlier, perceive a gap between what is possible and what is being achieved.

However, only 31 per cent of them are using an integrated sales and marketing system and the majority (51 per cent) are still using contact management software. Integration with existing systems is considered the biggest barrier to implementation.

"Organisations tend to expect an all-embracing system to be delivered on day one," says Wendy Hewson, a principal in Hewson Consulting Group, *(http://www.hewson.co.uk)*, a specialist sales and marketing IT research group. "Political and technical factors in some companies are leading to an indefinite postponement of implementation with consequent loss of benefits."

The benefits are in making sales and marketing more efficient and effective, as well as in making better use of the different resources available at appropriate points in the sales process.

"These systems are very easy to use," says Clive Burrows, co-author of *Ovum Evaluates Sales Force Automation, (http: //www.ovum.com)*, "so the salesperson only needs to know how to connect the cable in a hotel room. Once they see the benefit, they will use the system more and more. This will give the marketing department better information, so the production department will start to get better forecasts. They will get more faith in the figures because they can see more information.

"At that point, everybody wins, especially the salesman, who will have to complete fewer reports."

Nevertheless, the functionality of the packages available is holding back more widespread adoption of sales and marketing software. "Activities such as contact management, sales activity reporting, direct mail and telemarketing are simple mechanistic tasks which are well-supported by systems," explains Mrs Hewson.

"Systems for these have been available for some time and users requirements are well-known and catered for. However, co-ordinating an organisation's contact strategy with a customer or prospect across the most cost-effective marketing channels, typically involving direct mail, telesales, different teams of field sales representatives or distributors, is very difficult to do well. Systems have made little progress to date."

"The US is more advanced than the rest of the world," reports Mr Burrows. "In Europe the only major players are Point from Germany *(http: //www.pointinfo.com)*, which is strong on call centres, and Oxygen *(tel: 44 (0)181 740 7440)* from the UK, which has a kit of parts to build the system you want."

Most organisations are not migrating to more modern packages, but replacing in-house systems. This suggests that the market for packaged software is relatively immature.

"Siebel *(http: //www.siebel.com)* will be the market leader," predicts Burrows co-author, Beth Barling-Twigg, "although they are still new and don't yet have a full implementation. However, they are winning the big orders to the extent that their main competitor is in-house development."

Mrs Hewson is forecasting substantial growth in 1998. She reports that there has been little growth from 1994 to 1996, with fewer but more sophisticated systems being sold. In 1998 and 1999 she predicts rapid growth as a result of product strength and increased competitiveness between users.

"A trend will emerge of switching from outsourced operations, such as telemarketing and direct mail, to internal systems in order to get ownership of data and a single customer view across multiple communications channels," she predicts.

However, a sophisticated sales and marketing package is not easy to implement, because of the range of technologies involved. "We are advising organisations very strongly not to implement systems themselves," warns Mr Burrows.

"With client/server, a database, mobile computing, computer telephony integration and networking, very few in-house IT organisations have the range of skills. If you need a new system, you need it quickly and in-house staff will take 18 months to get it wrong. Using the vendor will be faster, cheaper and more effective."

The increasing use of implementation assistance is supported by research carried out by Hewson Consulting Group on behalf of Mercatus, an association for the profitable use and development of IT in sales and marketing. This predicts a ratio of licence to services revenue of 40:60 in 1998 and 30:70 by 1999.

Strategic marketing, planning and campaign management are vital areas which are not yet fully supported by available systems. Existing software is largely single user, aimed at helping teams of cross functional managers to draw up plans.

"It acts as a facilitator, records the views and assumptions they make and plays back the results of their assumptions," says Mrs Hewson. "It is only adequately supported by 10 per cent of systems.

"It is exceptionally difficult to do as you can't unbundle the software from the marketing techniques involved. Planning requires integrating hard data from marketing systems with 'softer' data, such as customer needs, competitive positioning and attractiveness."

The sales and marketing software already incorporates in its logic a complete model of the organisation's products, markets, channels and customers, so it would be natural to incorporate a planning and modelling facility which could accept and record the soft data, while providing managers with the hard data they need.

Meanwhile, Ovum is enthusiastic about the benefits offered by an integrated sales and marketing system.

"Can a business afford to wait?" asks Burrows. "In this competitive age, it's a question of grow or die."

Membership of Mercatus is open to vendors and end-users interested in the profitable use and development of IT in sales and marketing for an annual subscription of £295. Contact tel: 44 (0)1908 677840, fax 01908 677850.

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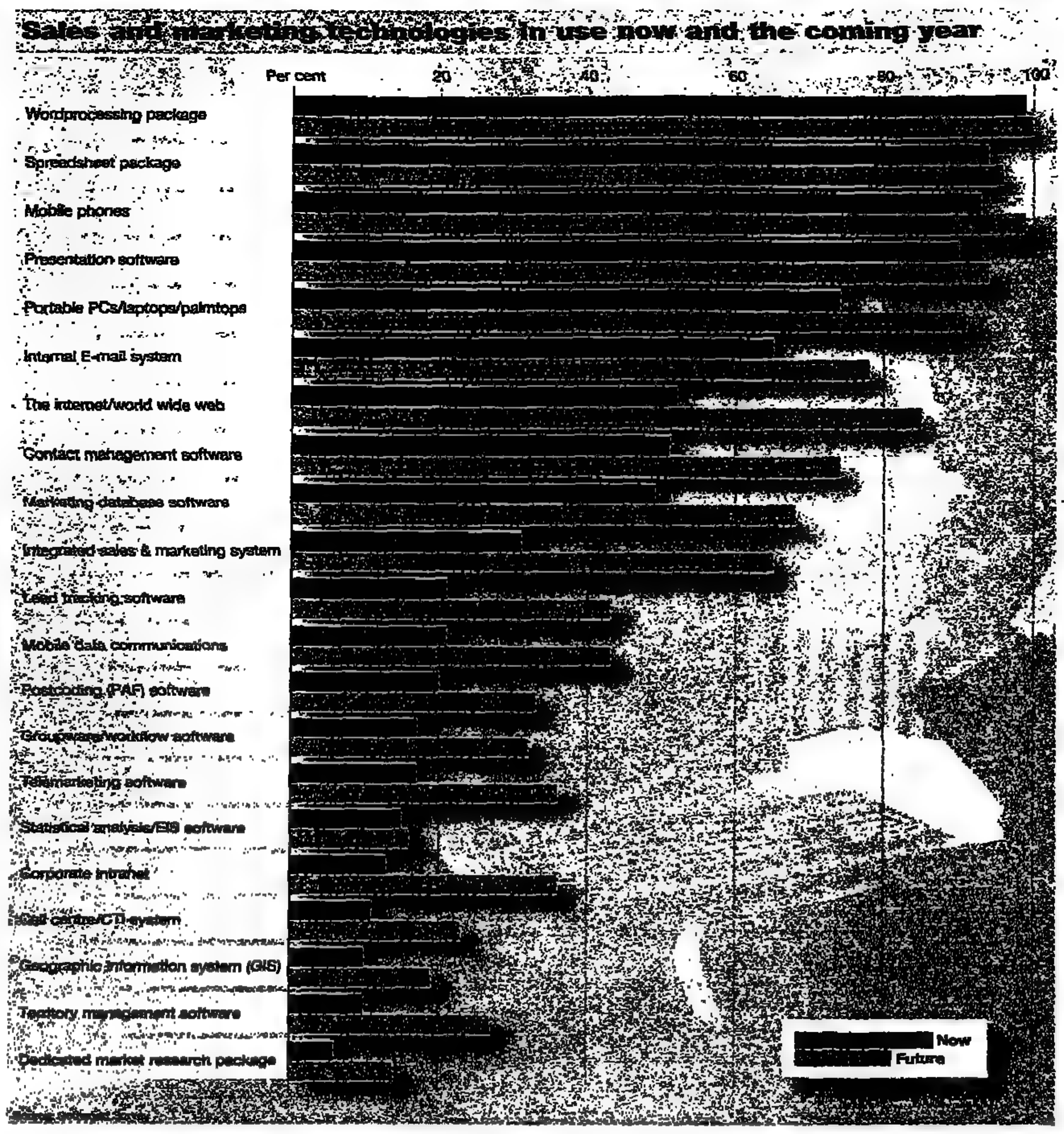


US companies are generally more advanced than those in Europe in applying sales and marketing systems. Above: the customer-service centre of US West, the telecommunications company, in Phoenix, Arizona. US West has partnerships in the Europe, including Telewest, the cable company, and One 2 One, the personal communications network

■ Support for the sales force

No simple solutions

Trouble-shooting for a remote sales team is far from easy, reports Tom Foremski

Supporting a remote sales force with adequate computing services is not an easy task. There are significant issues of how to support staff – who may be rarely in the office – with software upgrades, training, and creating the right computing infrastructure.

There are also issues of security, since providing outside links into the central office brings the potential for unauthorised users finding their way to sensitive company data. And while there are many solutions available for remote access, the number of options, configurations and parameters can be overwhelming to an organisation's already overworked IT staff.

Supporting a remote sales force means more than just allowing staff to run spreadsheets or word processors on portable computers, with occasional links into the office. A mobile sales force needs access to the latest inventory data, delivery schedules and prices; it also needs to be able to file sales orders and track their status. This means access to the company's database and, traditionally, this has always been a difficult task.

When problems arise, troubleshooting is difficult because the salesperson and their computer may be hundreds of miles away. A general rule of thumb is that supporting a remote worker is about a third more expensive than supporting a local worker.

Apart from solving the technical problems, the other half of the coin is deciding how to manage a remote sales force. Experts say that guidelines must be established that place an emphasis on training staff to enable them solve some basic computing problems themselves.

It also means setting up a schedule to update the applications on portable computers when the salesperson visits the home office – and making sure that staff are using the right versions of software and using only the software programs that they need to carry out their work.

Connecting with the main office is achieved in several ways. Some companies opt to use a groupware package such as Lotus Development's Notes software. This helps distribute marketing information, collect sales orders and access data about customer purchasing. Notes can be used to prepare presentations, with several users participating in the process through modem connections. Notes also provides security to prevent outsiders from tapping into the network.

Other solutions providing remote access to the central office local area network (Lan) include Novell's Netware Connect and Microsoft Windows NT Server Remote Access Service.

These two applications allow a sales staff member in a remote location to dial-in to the main office and make it seem as if they are just another local node on the network. Data transmission is slower because of modem connections, but there is a lot of value in having full access to all files and applications.

Similar remote access applications include Simware's A2B, Attachmate's Remote LAN Node, and Funk Software's Wanderlink. In addition, there are remote control programs such as Symantec's pcAnywhere and Traveling Software's LapLink which allow a remote user to take control of a PC from a remote location.

The future for connecting a remote sales force, however, lies with Internet technologies and Internet enabled database systems that can generate web pages on-the-fly. Using a web browser as a universal user interface, companies can set up special web sites to support their sales force.

The web site can include electronic forms to accept sales orders and handle data queries, cutting down on paperwork. A company's web site connected to its database, can provide real-time data on inventories, billing and delivery sched-

Continued on facing page

■ Relationship management systems • By Rod Newing

New ways to plan a global business

Managing complex relationships between global organisations presents a substantial challenge to sales and marketing systems

Investment banks are one of a wide range of organisations having to repond to increasing globalisation. Their customers need the banks to have a good understanding of their overall needs and investment strategies: banks must offer consistent advice across a range of markets, products and regions and design solutions which will add value to their customers' businesses.

"We have a huge global customer base, so we are constantly trying to improve and stay ahead of the competition," says John Weguelin, senior vice president of Global Capital Market System at Bank of America, the US bank with offices in 38 countries around the world.

"We need systems to help us to identify and leverage global investment opportunities, integrate and distribute economic research and market data and share comprehensive customer information."

However, traditional organisational structures, based on product groups and geographical locations, are poorly equipped to provide a uniform product range and services in each market in each financial centre. Groupware products, such as Lotus Notes and Microsoft Exchange, are ideal for building relationship management systems.

A relationship management system allows geographically separated executives with different market skills to share information about each main client and so work together to develop joint client marketing strategies and pitches. As well as providing complete details of all enterprise-wide relationships, contacts and meetings, a relationship management system can provide prospect status, potential investment needs, responsibility and date and nature of next action, including delegated actions.

"We service our customers in 10 different countries and they expect us to be one organisation," says John Odmann, project manager at Svenska Handelsbanken, the leading Nordic bank with 500 branches.

"Lotus Notes is an excellent tool which will allow staff regardless of location to build up a more complete picture of the client's requirements and needs."

Such a system enables the preparation and management of individual global client marketing strategies and allows monitoring and maintenance of the deal pipeline, including forecasts.

A well-designed system will also provide management information, covering areas such as growth in multi-product clients, monitoring success of cross divisional account teams or reviewing consolidated client profitability.

Anybody in any office can find information on current and potential clients, covering all parts of both organisations throughout the world and in all markets. The systems also allow access to internal electronic professional information libraries, covering areas such as products and services, financial instruments and market research. Perhaps most importantly, they allow dispersed staff to conduct group discussions and draw up joint client marketing plans.

Standard Chartered Bank, which has a network of 600 offices in 40 countries, has used Lotus Notes to develop an integrated system which supports customer information, external news, internal news, to do lists and credit processing. It also gives access to a management information system through which account managers can track exposures, revenues, and product profitability. "It acts as a single window though which an account manager receives all the information he or she needs to manage the relationship effectively and out through which he can send any communication," says Robert Frazer, head of marketing.

> Groupware products are often ideal for building relationship management systems

Like all groupware applications, relationship marketing systems are closely tied with changes in corporate culture. "It has been transforming the way people approach the business, and the way in which they are communicating so much more effectively now, has really been a revelation," says Mr Frazer.

"We are instilling a culture of rigorous account planning and, by using the call reports and deals-in-pipeline, making sure that people work as a much more effective team, wherever they are in our worldwide network of offices."

Bank of America has also achieved cultural changes: "We have empowerment in terms of the increased knowledge we have placed in people's hands," says Mr Weguelin. "Not just about our business and our customers, but more importantly about our customers businesses and their needs from the bank.

"The introduction of Lotus Notes has been an enormous motivator in getting people to share information which they would otherwise have retained for themselves. We have seen greater co-operation, teamwork and sharing of information which has certainly resulted in increased cross selling and an ability to close transactions."

Although Lotus Notes has established a strong position in relationship marketing systems, Microsoft Access has entered the arena. "We implement Menhir's Rapport *(http: //www.menhir.com)*, which is based on Microsoft's Exchange and Office products," says Paul Foll, director of CMG the European systems integrator.

"It was developed for wholesale banking, but would be relevant to any global business-to-business relationship management."

With Rapport, *(info@menhir.com)* any document created in Microsoft Office is tagged both to the originator's and recipient's positions in their respective organisational hierarchies. Importantly, it has the ability to administer the security required by "Chinese walls". CMG does not recommend implementing a relationship management system using Intranet technology because it does not yet offer security.

As business becomes increasingly global, the demand for relationship marketing systems is going to grow. Cross-selling opportunities are increased by allowing staff to understand and share client requirements across product groups. This enables them to identify key trading patterns which can provide new opportunities for their clients.

It also increases their perceived professionalism when seeking new business and helps to keep existing clients. A client-focused relationship management system provides a very strong means of building long-term market share and consistently growing profits.

SBC Warburg, a division of Swiss Banking Corporation, the global investment bank, is very aggressive about using its relationship management system. According to Otto Benz, IT project leader: "We will extend Notes to more clients, improve the quality of our presentations, increase our marketing options and stay ahead of the competition."

Forecast of big rise in sales via the Internet

A new survey reveals that the UK's top companies expect almost one-in-five of their sales to come directly via the Internet in five years' time, representing a total of about £170bn, *writes Michael Wiltshire.*

This estimate – by Harris Research for KPMG Management Consulting* – is made despite very low levels of investment in the technology and the fact that more than 80 per cent of the companies questioned cannot currently attribute any sales to the Internet.

The survey reflects the views of marketing directors of 100 UK companies – each with an annual turnover of more than £200m – concerning their use of electronic commerce, including intranets, smartcards and the Internet.

Direct sales attributed to the Internet are predicted to grow from 2-3 per cent today to about 17 per cent over the next five years.

**Electronic Commerce Research Report: KPMG Management Consulting, London; telephone 44 (0) 171 311 8786*

Magazine: 'Doing Business Online'

The first of a new series of glossy magazine guides entitled 'Doing Business Online', will appear with the next issue of the FT-IT Review on Wednesday, December 4.

Features in the new guide, produced in co-operation with '.net' magazine, will look at security issues on the Internet and ways to create corporate web sites.

For details relating to this and other regular FT-IT features, please see the information panel on Page Two of this review.

■ Telephones and marketing • By Michael Dempsey

Machines are the answer

Companies have begun to exploit the integration of computers and telephones

The CTI market in Europe will be worth $1bn by the year 2000. Above: rapid call-handling with Nortel Meridian equipment

No matter what the time of year, the IT sector always has a flavour of the month. And, judging by the flurry of marketing activity, extolling the virtues of call centres and the allied technology of computer telephony integration (CTI), it appears that linking processing power to the humble telephone is the next great hope for an industry that never misses an opportunity to market a concept.

A growing number of call centre contracts would seem to bear out the marketing push. But are companies just turning to computerised call centres to shed staff by steering telephone inquiries into a remote system with fewer salaried employees?

Schema, a London-based telecoms consultancy, has conducted interviews with 500 businesses across Europe that use CTI. It concludes that the market for these systems will grow from less than $100m (£64.1m) in 1995 to more than $1bn by 2000. When it last carried out this survey, in 1992, only 4 per cent of companies interviewed had, or planned to, install CTI. Now that figure stands at 13 per cent.

Off-the-shelf packages which can exploit CTI hardware or add value to other applications are also beginning to arrive in significant numbers.

This is opening up CTI to businesses which might not seem obvious targets for leading-edge technology. The key lies in the way the technology extends the scope for contact with customers for retail outlets.

Milk Marque emerged in 1994 when the UK's statutory monopoly in milk sale and distribution, represented by the Milk Marketing Board, was deregulated. Dairy farmers could now choose where to take their produce. Milk Marque collects, tests and sells milk for some 20,000 farmer members.

The company realised that costs would become critical in a competitive market-place, so a traditional structure based on five areas has been replaced by a central help desk with one call centre. This employs 12 staff working on rotas seven days a week, every day of the year.

To make such a lean operation work, Milk Marque divided calls between complex queries needing expert intervention and routine calls, in an operation dealing with 2,000 calls a week. It turned to Germany's Siemens to implement a call centre that would meet this specification.

Jack Griffin, manager for voice applications at Siemens in the UK, says that his company makes money out of CTI by focusing on integration. "Siemens might charge around £20,000 for a system, but that would buy a very basic box. It all needs to be set up very precisely. You're talking about a technology that's very hard to understand, the issue is how to get it serving the business quickly."

Milk Marque bought an automated call distribution system which takes calls and queues them into another Siemens product, an integrated voice response (IVR) system. The IVR is linked to Milk Marque's Sequent computer system containing the results of milk quality tests. A farmer rings in, presses the hash key on his phone, gives his membership and personal identity numbers, and then interrogates the computer using IVR, a process which does not require a member of staff.

This attribute of CTI, removing the need for some personnel, is not as ruthless as it might sound. "Many jobs in call centres are seriously boring," Griffin explains.

"People burn out, they just don't last long dealing with these queries. We remove the boring bits of the agent's job so the customer only discusses real live matters with a caller."

IVR exploits the milk test database by pretending to be a number of computer terminals. It can pick up the latest information typed into the system and distribute this by following its own script. This process is known by the unlovely but memorable term "screen-scraping".

Human intervention continues alongside IVR. Siemens has configured Milk Marque's call centre to flag calls from Wales and divert them to a Welsh-speaking phone agent.

Many call centres boast about the information made available to staff via computer screens. Griffin notes that Milk Marque no longer has computer terminals on its agents' desks – the human side of the equation involves phone contact only. "Milk Marque has devolved the tedious side of its work, held on the large Sequent computer, to IVR. Machines talk to machines and people talk to people." This is the kind of result IT suppliers have promised for the last two decades, but rarely, if ever, delivered.

Application

The commercial possibilities of this have begun to impress users. London Electricity, the £1.3bn utility serving two million customers, plans to offer time and capacity through its new purpose-built call centre in Sunderland, hundreds of kilometres north of its London base.

London Electricity has welded together an ACD system from US electronics giant Rockwell, IVR from another US supplier Syntellec and software that stores and retrieves call data from UK CTI specialist Inference.

Gordon Critchlow, customer communications manager at London Electricity, says his company handles two million calls a year. A London Electricity employee since 1968, Critchlow is about to relocate to Sunderland. Faced with an open market in UK electricity supply from 1998, London Electricity wants to be a national utility. And the potential of its CTI operation should add to its turnover.

With ACD able to identify which supplier a caller is searching for, there is no reason why it shouldn't supply call centre facilities – and experience – to other utilities.

CTI growth is not another IT marketing illusion. London Electricity is one of 220 companies that have joined the Call Centre Management Association within 12 months of its founding. The reason behind this explosion in sales may well be the fact that smart users can sell on their own expertise with no extra outlay on the original call centre investment.

■ Data visualisation in marketing • By Michael Dempsey

Pinpointing the best sites

Business planners are able to make shrewd campaign decisions with the use of data mapping software

For a very obvious concept, data visualisation has taken a long time to arrive. Expressed in its most simple form, it entails expressing a mass of numeric information in a colourful format.

This allows salient points to be grasped quickly, which in turn means pulling out facts that make a difference in the commercial market-place.

Data visualisation owes its current status to a number of factors: the entire field of data-mining, the search for valid information in the mass of data acquired by computer-literate large businesses, has focused attention on what can be gained by a shrewd evaluation of existing material.

Another reason for the rise of data visualisation is that when material is represented graphically, it is a lot easier to understand – and IT analysis has spread into all levels of management.

Businesses that need to react to market trends cannot wait for lengthy technical examination of their sales data by distant specialists. They want to put the power to reach practical consultants at the fingertips of managers.

Finally, there is the cost factor. Cheaper processing power is continually cited as the reason for trends such as client-server computers displacing the large, expensive mainframe of yesteryear. But the proliferation of powerful computers that do not soak up half a company's IT budget also allows the user to experiment with new 'flavours' of software.

IT suppliers who offer data analysis services using visualisation techniques can cost-out their time at a realistic rate if they are not tied to a small number of top-range machines.

Keith Bear, an IBM business manager in the UK, is active promoting Diamond, a £400 package that allows traders to apply data visualisation to financial statistics. Developed with US software house, Infinity Systems, Diamond is aimed specifically at risk management.

"Based on our models, it allows you to take historical data and project that forward. It gives you a way to test assumptions and correlation," says Bear.

Investment bank JP Morgan provided the risk factor data that underlies Diamond – and JP Morgan's contribution to this product highlights the importance of having the right parameters fed into a data visualisation project.

Getting the rules right before you begin to interpret data in a graphic form is known in this field as establishing a "gravity model". The gravity model is essentially the weighting given to comparative types of information; while the actual data visualisation product may appear quite cheap, the kind of information it demands can be expensive to acquire.

Network

Nigel Weston, business strategy manager for Daewoo Cars, relied on data visualisation techniques to devise a dealer network that spans the UK.

Daewoo, a Korean conglomerate ranking as the 33rd largest company in the world, formed a UK vehicle subsidiary in 1994. Starting with a clean sheet gave the company a chance to place dealerships and support outlets where they could best serve the target customer-base.

"Daewoo's gravity model was clear before the company paid for any software. You have to write the rules," says Weston, "and for Daewoo, people of a certain age and income are critical."

The company had identified people over 55 as a key purchasing community. Daewoo wanted to locate its 30 main sales offices, plus support facilities, in the right spot. It turned to MapInfo, a £1,100 desktop mapping package.

"We run this as a centralised mapping system. It allows us to plan outlets, any recalls of models and customer distribution. We use it to plan local marketing campaigns and media spending," says Weston.

MapInfo users must Geo-code their own data, or data they have purchased. This entails attaching some form of critical tag, typically a postcode, that allows MapInfo to display data.

The resulting map can feature simple colours, or symbols the user requires. Daewoo used MapInfo as a software engine. But it also paid for population census and mapping information.

Further software, Mosaic – a collection of lifestyle data that goes down to every 15th

Continued on next page

■ Support for the mobile sales team

Web sites will make work easier

Continued from facing page:

ules plus historical information on each customer; taken a step further, it could also help to produce personalised presentations for customers.

An Internet-based solution also brings several important support benefits. Since the only thing the sales person needs is a portable computer with an installed web browser, support costs are lower. The web site can be set up to provide all the information and control the display of that information without requiring the user to run their own spreadsheets or presentation applications.

Java or ActiveX-based applications can be developed to add further functions by allowing the user to download small, specialised programs when required, rather than have to carry them around constantly.

Database companies such as Sybase, Oracle and Informix are rapidly adding features to their databases that help support a remote sales force by using Internet connections.

"We allow you to take advantage of distributed computing by giving a portable laptop to a sales person. We've introduced things like message replication so that whenever you get the chance to get connected to the home system, you can replicate changes from your database to the corporate database," says David Hseih, vice president of enterprise product marketing at Sybase.

"The centralists of the world would say 'take away the PC from the salesman and let them call into the home office and talk to someone about whether we've got that product in inventory' or how quickly we can get 'a thousand widgets in red' out to the customer. We don't think that's the way to do it," he adds.

Opportunities

Oracle also sees big opportunities in enabling its databases to create web pages 'on the fly' for applications such as supporting a remote sales force.

"If you look at the content on intranets and the Internet, most of it is static pages. Whereas most of the interesting data that people and enterprises use within the enterprise, as well as their suppliers and customers, is stored in a relational database for security purposes, reliability, availability – all those things. So what we see is that the web is going to evolve from static documents to dynamic documents where the contents will be constructed when the user makes the request for what they want," says Sohaib Abbasi, senior vice president of Oracle's tool product division.

While giving a sales force access to a web site brings the same concerns over security, firewalls can be constructed and security procedures established that makes it very difficult for outsiders to gain access to sensitive information. And ultimately, the same system could be used by customers to make place their orders themselves and conduct the entire sales process in one place.

■ Interview with Peter Schnell, co-founder of Software AG • By Geoffrey Nairn

Passing the baton to a new generation

Marketing is of paramount importance to IT companies, says Peter Schnell and he cites Software AG and SAP as examples of European companies successfully competing with bigger US suppliers. Today, Schnell's company has customers in more than 80 nations

In 1969, Peter Schnell, co-founder of Software AG, set out to crack IBM's dominance of mainframe software by building a better database.

The technology he developed, Adabas, still wins orders today, and the company, one of Europe's leading software houses, is poised for a new phase of growth as a supplier of data warehousing software and other products that turn data into valuable information.

Mr Schnell, however, will not be taking Software AG into this new era as he announced his retirement as chairman at the beginning of this month. At the age of 58 and after 30 years in the computer industry, he has decided it is time to pass the baton to a younger generation better prepared to cope with the dramatic changes sweeping through the once-sleepy world of database software.

Software AG, based in Darmstadt, is Germany's second largest software house behind SAP and, like the latter, it has stubbornly remained a private company. All the shares were owned by Mr Schnell until 1993, when he placed the entire holding, reportedly worth around $500m, in two private foundations, to ensure the company's independence after his retirement.

Three of SAP's founders recently did the same thing. Times change, however, and Mr Schnell believes Software AG will soon have to seek external funding, either through a flotation or by offering a minority stake to a friendly bidder.

"It's no longer true that the company can grow simply by investing its profits in innovation. The innovation cycles have become too short and now we need new capital. I have no doubt that Software AG cannot stay completely private," he says.

The list of potential partners is long. One obvious candidate is SAP, which has a similar culture, and activities that dovetail well with those of Software AG. Another possible suitor is Microsoft. Software AG is converting Microsoft's object technology, called Distributed Component Object Model, to run on mainframes and the fruits of this collaboration, predicted for next year, will take Microsoft into new territory.

"Microsoft knows the consumer market is not 'everything' and they obviously want to get into the very lucrative market for enterprise computing," says MrSchnell. The prospect of the company he started 27 years ago having to accept external shareholders does not disturb him.

"It is a major change, given the history of the company, but we have to adapt to the needs of the real world," he says. Software AG is currently going through a rough patch and reported a net loss of DM50m for 1995. It is in the middle of a restructuring programme which includes abandoning non-strategic activities and refocusing on a smaller number of lines of business. It hopes to be profitable again in 1997, but to achieve this it has to save DM100m in the next two years.

Roughly 350 people will lose their jobs – a bitter blow for Mr Schnell who is increasingly worried about the social consequences of the information revolution.

"Using IT to slash costs is a real time-bomb and we cannot act as if nothing has happened," he says. Last June, the topic was explored in Software AG's annual symposium, which had as its theme "Information Technology with a Human Face".

Software AG is best known for its Adabas database and the Natural fourth generation language. These products have kept the company successful and independent in an industry notorious for rapid change and mergers.

Software AG has more than 5,000 customers in more than80 countries. Adabas was originally developed for mainframes but its latest incarnation, Adabas D, works on many types of PC and server platforms. It can be used with standard relational databases from vendors such as Oracle, Sybase and Informix, though Mr Schnell clearly believes Adabas is superior.

"The 'relational' approach was a function within Adabas long before these other companies were founded and Adabas includes other data models that you cannot do with a purely relational database," he says.

The Adabas technology was recently enhanced to manage World Wide Web documents on a web server, and Mr Schnell sees a bright future for Software AG in the Internet age. However, he cautions against companies rushing into building intranets and distributed systems.

"Nearly all distributed projects fail to meet their price tag because the moment you distribute something, you get problems you never realised before. There is an extra dimension of complexity," he says. Adabas made Mr Schnell's fortune in the early days, but he says the product represents just a fraction of the company's revenues today. The new focus is on products that sit on top of databases and make data easier to use within organisations. These include products to model data and extract it from existing databases, reporting and query tools to allow non-technical managers to access a database, and data warehousing products.

"Every other year the industry has to invent a new buzz word and 'data warehousing' is the latest. The concept, however, is 100 per cent valid.

"Data warehousing is completely different from the way computers were used in the past. Instead of automating business processes, you take existing data and create something out of it which – for you – as a human being, is information."

Back in the 1960s, when Mr Schnell was working as a computer consultant in Darmstadt, his clients were struggling to make sense of the data on their mainframes. "I did projects for large companies and found they were constantly trying to re-invent the wheel," he says.

Schnell: stepping down after 30 years in the business

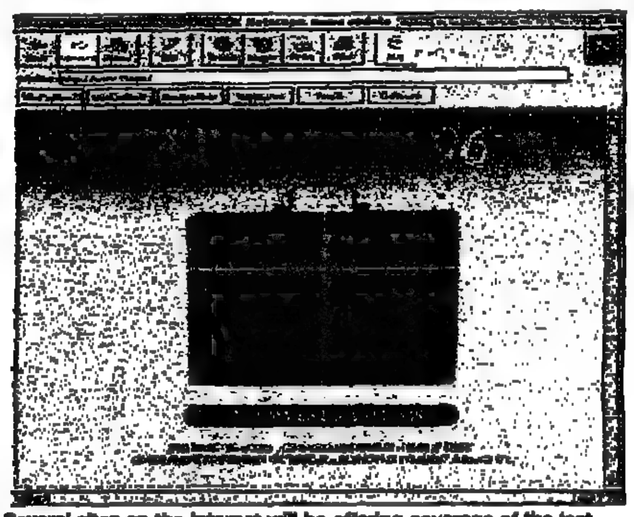
Exploiting his background in mathematics research, he set out to build a database that would answer these cries for help . . . and so started Software AG.

It has taken 30 years, but Mr Schnell believes the data warehouse could finally crack the problem of turning unintelligible data into useful information, thanks to the recent arrival of relatively inexpensive processing power that makes the data warehousing concept affordable for business users.

The data warehousing market is predicted to be worth $7bn in 1997, but is hotly contested. Software AG has strengthened its marketing muscle by poaching a director to oversee marketing and customer service from the US computing services giant EDS, and Mr Schnell believes the restructured company is more market-driven than it was in the past. He cites as an example Dmart, an easy-to-use "data mart" product unveiled recently. Data marts are small data warehouses tailored to a specific group of users or applications, such as marketing or customer-information systems.

According to Mr Schnell, marketing is of paramount importance to IT companies and he cites Software AG and SAP as examples of European companies successfully competing with bigger US companies.

He wishes there were more examples to cite, however. "European firms have a tendency to invent things and not understand how to make a product out of it. But in the US, there is more emphasis on marketing, which speeds up the testing of new ideas. In Europe, we more or less want a 'guarantee' it will work," he says.



Several sites on the Internet will be offering coverage of the 'set piece' of Britain's economic calendar on Tuesday, November 26. Accountancy firms and economic think tanks will be gearing up to predict the contents of Chancellor Kenneth Clarke's dispatch box in the run up to the big day. The FT web site will be offering full coverage of the Budget, with reaction and analysis of what the Chancellor's decisions will mean for a range of individual taxpayers. The FT web site (http://www.FT.com) will carry full details from the Treasury, including the text of the Chancellor's speech.

The best sites

Continued from page 17:

household – gave MapInfo more critical information to analyse.

MapInfo threw this data up in terms of a thematic map, showing hot and cold areas, depicted as red and blue.

"We used our gravity model to consolidate on the central areas of chosen populations within a given drive time," adds Weston adds.

None of this effort came for usual PC software prices. According to Weston, Daewoo's annual budget for planning using data visualisation, in conjunction with geographic information systems, amounts to £60,000. He says, however: "It's money well spent – you have to rationalise *that* expense against the £60m we've spent on sites and also consider the financial consequences if we put one site in the wrong place.

"It's a minimal cost in terms of what's at stake."

Weston notes that "specialist consultancies in the field can charge £30,000 per town to carry out this kind of analysis and we needed 40 or 50 towns studied".

Including after-sales support operations, Daewoo has 176 premises that owe their address to data visualisation projects. From a standing start, it has cornered 1.8 per cent of the British car market, selling over 17,000 vehicles between January and September 1996, with a brand that no UK driver would have recognised two years ago.

A 'datamap' button on Microsoft's Excel spreadsheet designed to work with the Windows 95 operating system, now introduces users to a cutdown version of MapInfo. Thus, data visualisation is selling cars and seeping through onto the desktop.

Excitement over Java

Continued from page 1:

were few Java development tools available, Java developers had limited experience with the language and that development processes were experimental or undefined.

Sun's Lambert argues that most of these issues have since been resolved. He points out that there is now a wide range of development tools for Java and an estimated 200,000 Java developers – a number which is fast catching up with the 400,000 Windows developers.

'An earthquake'

Indeed, some analysts, including Robin Bloor of the Bloor Research group, predict that Java is at the epicentre of a seismic shift in the global $650bn computer industry which could pose a serious threat to Microsoft and Intel, the two industry powerhouses created by the explosion of the personal computer – "this earthquake will totally re-arrange the IT landscape, affecting all vendors of IT products and services as well as their customers," he says.

"Java will turn the World Wide Web into a vast network for client/server operation . . . because Java executes anywhere: for the first time, software application development can take place separate from an operating system. This enables the Internet, changes the client/server paradigm and smashes the door open for the 'thin client' [*i.e.* a stripped-down PC – or an 'NC' – designed to work across a network]."

□ Office software market: Microsoft gains ground in the intranet arena, page 9.

□ Business applications for intranets: see pages 11-13.

FINANCIAL TIMES
COMPANIES & MARKETS
Wednesday November 6 1996

IN BRIEF

Commerzbank profits up 37%

Commerzbank, Germany's third biggest commercial bank, announced a rise of 37 per cent in operating profits for the first nine months to DM1.67bn ($1.1bn). However, the result was below some analysts' expectations and represented a slowdown from the 48 per cent advance of the first half. Page 16

HK Telecom advances 12% at mid-term
Hongkong Telecom announced a 12 per cent rise in net profits to HK$5.39bn ($697m) for the six months to the end of September. However, the company, a subsidiary of Cable and Wireless of the UK, lost 15 per cent of its international market share in the first half of the year, compared with the same period in 1995. Page 20

BP third-quarter profits up 9%
British Petroleum reported third-quarter earnings in line with market expectations. Net profits for the quarter were up 9 per cent to £650m ($1.05bn) on a replacement cost basis and before exceptional items. Net earnings for the first nine months of the year were a record £1.93bn, representing an 18 per cent rise from last year. Page 22

Gehe in Lloyds Chemists bid
The battle for Lloyds Chemists intensified as Gehe of Germany returned to the fray, bidding £650.6m in cash for the high street pharmaceuticals chain. Page 22

Whitbread pre-tax profits up to £177m
Whitbread reaped the rewards of heavy investment in pubs, restaurants and hotels and an upswing in brewing profits, reporting a 14 per cent rise in interim pre-tax profits to £177.5m. Page 23

US demand surge buoys market for LPG
The booming market in liquefied petroleum gas has hit US petrochemicals producers hard. LPG contract prices from Saudi Arabia – the main supplier – were recently fixed at $250 a tonne for both propane and butane, an increase of almost $50 a tonne from the October price. Page 26

Companies in this issue

Market Statistics http://www.FT.com

Chief price changes yesterday

FRANKFURT (DM)			
Rises			
Altana	1275	+	55.5
Didier-Werke	118.0	+	4.5
Kali & Salz	188	+	6
Preussag	370	+	8
SAP AG	195.5	+	5.8
SSL Carbon	182.0	+	11.9
NEW YORK ($)			
Rises			
Cabletron Sys	68	+	2¾
Compaq Comp	69¼	+	3¼
First Data	81¼	+	3¼
Falls			
Cameco	14¼	–	1½
KCS Energy	37⅞	–	4⅜
Zale	16⅛	–	1⅛
LONDON (Pence)			
Rises			
Memory Corp	88½	+	10
Yorkshire Food	42½	+	5
Falls			
ADT	1152½	–	62½
Fairway Grp	81½	–	28½
JKX Oil & Gas	118½	–	9½
Wace Grp	59	–	7½
TORONTO (C$)			
Rises			
Biovail	41.1	+	2.8
Edper Grp Rec	64.0	+	5.5
Falls			
[illegible]	11.0	–	0.9
Brookfield Prop	9.05	–	0.95
Cameco	19.85	–	1.65
Mosaid Tech	17.5	–	1.5
PARIS (FFr)			
Rises			
Carrefour	2951	+	120

Legris	206	+	9
Pernod Ricard	286.4	+	11.1
Renault	117.7	+	4.9
SGS-Thomson	283.6	+	9.6
Falls			
Eridania BS Cl	866	–	35
TOKYO (Yen)			
Rises			
Meiji Milk	676	+	23
Nintendo	7810	+	220
Falls			
Kogami Tsush	821	–	32
Ito Yokado	5480	–	170
Mercian Corp	882	–	25
Nissho Iwai	493	–	17
HONG KONG (HK$)			
Rises			
Sth Ch Mm Pst	7.00	+	0.15
Falls			
First Pacific	10.40	–	0.15
HK Telecom	13.35	–	0.25
Hang Seng Bank	90.5	–	2.0
Henderson Land	68.50	–	1.25
Wheelock	17.35	–	0.35
BANGKOK (Baht)			
Rises			
Inoue Rubber	41.50	+	3.75
Ona Hldg	22	+	2
Falls			
Charan Ins	82.0	–	6.5
Int Cosmetics	144	–	15
Karat Sanitary	42.75	–	4.50
Siam Steel Int	55.75	–	3.75

New York and Toronto prices at 12:30.

Bertelsmann group may be reorganised

Move would allow more outside investment

By Frederick Stüdemann in Bonn

Bertelsmann, the German media group, is considering a corporate restructuring which would allow some of its units to be offered. Mr Mark Wössner, chairman, said the group was thinking about making its four main business units – book publishing, printing, Gruner + Jahr, its magazine and newspaper subsidiary, and the television and entertainment division – into public companies under a holding company.

This would allow outside investors to take stakes – a marked change for Bertelsmann, which is predominantly owned by a foundation and the family of Mr Reinhard Mohn, formerly sole proprietor. An exception is Gruner + Jahr where the Jahr family retains a minority stake.

Restructuring Bertelsmann, Europe's largest media group, would enable further large-scale expansion, Mr Wössner said. This was particularly true of the television and entertainment unit, which would be the first candidate for flotation.

This could happen within two or three years, with the other units following considerably later. "I don't see it happening in the book and printing divisions or at Gruner + Jahr for 10 years," he said.

Since postponing its plans for digital pay-TV this year, Bertelsmann had refocused its television activities on free TV, he added. "Free-TV is significantly bigger than pay-TV. Free-TV [in Germany] has a total volume in terms of advertising revenue and licence fees of DM15bn ($9.9bn), pay-TV only DM500m."

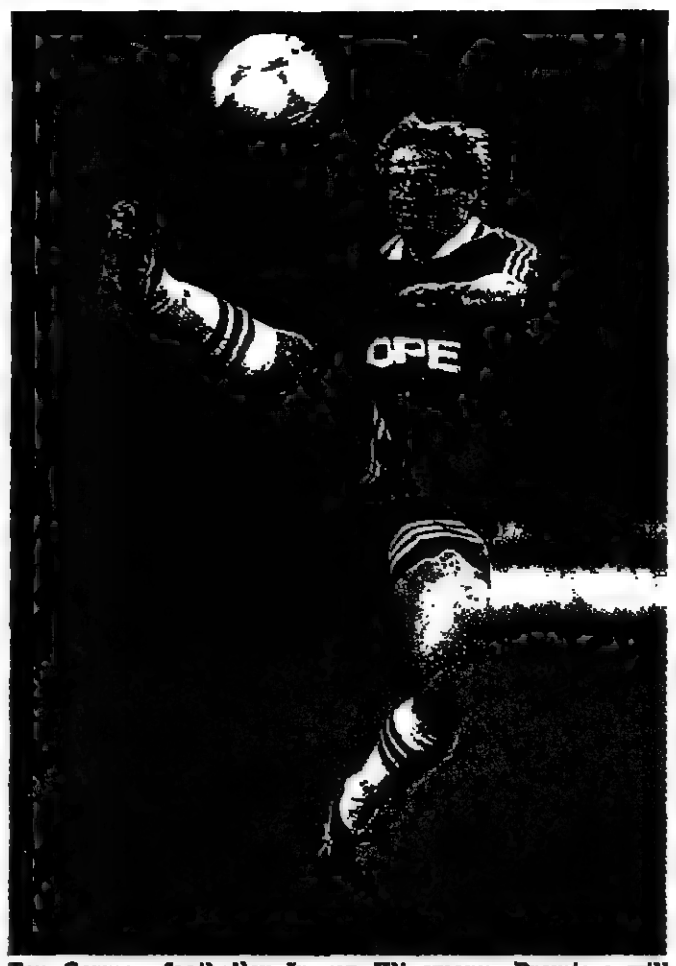
Mr Wössner said Bertelsmann remained committed to Premiere, the subscription channel in which it holds a 37.5 per cent stake. The channel has 1.35m subscribers, and is signing up some 10,000 a week.

Premiere was an ideal basis for eventually developing digital pay-TV, he said. But this would require the consent of rival Kirch Group, also a shareholder in Premiere. Kirch launched DF-1, its own digital pay-TV service, this year.

Despite acrimonious exchanges and even courtroom battles, talks between the two continue. Bertelsmann would like to see both networks brought closer together. "My wish would be to see Premiere as a stand-alone network with two core areas – films and sport – and the rest of pay-TV covered by DF-1," Mr Wössner said.

Premiere yesterday confirmed the expansion of its live coverage of soccer matches. The exclusive deal with the German football federation covers both digital and analogue broadcasting. It gives Premiere the right to screen two games a week until mid-1998.

Premiere also has first refusal for the following five football seasons.



Top German footballer Jurgen Klinsmann: Premiere will increase its exclusive live coverage of matches Picture: Allsport

Valeo future secured by sale of 27% stake

By David Owen in Paris and Robert Graham in Rome

The medium-term future of Valeo, one of the jewels of the French car industry, was settled yesterday in a deal valuing the parts maker at more than FFr23bn ($4.5bn).

The controlling 27.4 per cent stake in the company held by Cerus, the French holding company of the Italian industrialist Mr Carlo De Benedetti, was sold to three separate buyers – principally Compagnie Générale d'Industrie et de Participations, a French industrial holding company – for F330 a share, or FFr6.33bn.

The move is a big retrenchment in the business activities of Mr De Benedetti. Mr De Benedetti and his family held the Valeo stake via their French stake in Cerus. This in turn was owned by Cir and Cofide, the family-controlled holding companies.

At one stroke, Cir-Cofide's consolidated turnover has been cut by two-thirds from L12,500bn to L4,500bn ($3bn), excluding the family's 14 per cent stake in Olivetti, the troubled computer and information technology group which is not consolidated. An aide of Mr De Benedetti described the sale as "a big sacrifice".

Cerus will also benefit from an extraordinary interim dividend of FFr10 a share, as well as a possible additional FFr10 a share payment if Valeo's 1997 net profits reach at least FFr1.45bn – a figure analysts say is within the bounds of possibility. The company said this could take its overall receipts to FFr5.7bn.

The deal keeps Valeo, which has been a target of speculation for most of this year, firmly in French hands. CGIP, chaired by Mr Ernest-Antoine Seillière, will end up with 20.2 per cent. Caisse de Dépôts et Consignations, a French state-controlled financial institution, will raise its 1.9 per cent stake to 5.4 per cent. J.P. Morgan GT Corporation, a subsidiary of J.P. Morgan, CGIP's adviser on the deal, will take a 3.6 per cent holding.

The deal was concluded at 19 times prospective earnings. Mr Seillière said he had "no doubt that in three years' time we will not even remember the price we paid. I would never have undertaken this operation if it had not been in the exclusive interest of my shareholders". However, he promised the deal would not be dilutive.

Lex, Page 14

Gengold backs down in mine contracts row

By Mark Ashurst in Johannesburg

Gengold, the gold mining arm of the South African mining house Gencor, has bowed to pressure from investors for an independent valuation of management contracts between South African mining houses and individual goldmines.

The controversial contracts have underpinned the world's largest gold industry since its inception.

London-based Mercury Asset Management led a shareholders' revolt against Gengold's proposal to charge individual mines R127.6m ($28m) to cancel management contracts with the group's head office.

At an extraordinary general meeting of Gencor-controlled mines in Johannesburg, Mr Julian Baring, managing director of MAM, said: "The quicker South Africa comes into line, the quicker South African gold shares will be properly valued."

The system of management contracts for technical expertise provided by the country's biggest mining houses is facing mounting criticism from investors, who claim they undermine efforts to contain rising costs at deep level mines.

Management contracts absorb about 5 per cent of the total capital spending of most South African gold mines, plus a fraction of a percentage point of annual turnover. Mr Baring has been the chief architect of their abolition.

Mr Tom Dale, Gengold managing director, said the decision to cancel the contracts was "what shareholders are demanding". Gengold did not need shareholders' approval to cancel the contracts but had voluntarily sought their support, he said.

Shareholders in Gengold's Winkelhaak and Leslie mines yesterday voted to reject the R126.7m charge to cancel the existing management contracts. Mercury has a 26 per cent stake in them. Gengold, the largest shareholder, abstained.

Rand Merchant Bank and UAL, the merchant banks which carried out the valuations, defended the charge. They said the contracts were worth R17m a year over ten years, adding that the one-off payout was tax deductible and would cost the mines only R63m after tax.

BA joint bid for French carrier approved

By Ross Tieman and Michael Skapinker in London and David Owen in Paris

British Airways yesterday won its battle to take over Air Liberté, the independent French carrier, with the Rivaud banking group.

The commercial tribunal in Creteil accepted BA's plan to invest FFr440m ($86m) in the airline for a 67 per cent stake. Rivaud will provide FFr190m.

Mr Marc Rochet, chairman of TAT European Airlines, BA's existing French subsidiary, will run Air Liberté. BA said the two airlines would be kept separate "for the time being".

Attention in France will now switch to AOM, another domestic airline, owned by Crédit Lyonnais, the bank.

The state-owned Consortium de Réalisation, charged with selling Crédit Lyonnais' assets, is expected to sell the airline before further liberalisation of air travel in the spring.

Air France hinted last month it might eventually bid, although European Commission conditions attached to a FFr20bn aid package will probably rule this out until next year.

BA yesterday reported its first fall in first-half operating profits since the Gulf War five years ago, blaming higher fuel prices and the impact of a threatened pilots' strike.

Operating profits at the UK's leading airline slipped by 2.1 per cent to £512m. But a £26m contribution from Quantas in Australia and a £17m dividend from USAir helped lift pre-tax profits for the six months to September 30 9.3 per cent to £470m. This was in line with expectations.

However, a lower-than-expected passenger growth contributed to analysts paring full-year forecasts; UBS, house broker, reduced expected pre-tax profits by £30m ($49m) to £640m.

The figures were aided by a £21m reduction in interest charges, as gearing eased to 54.7 per cent.

Although further fuel price rises were expected, Sir Colin said, the economic outlook for BA's main countries of operation remained encouraging.

He added that the airline planned to cut costs by $1bn in the months ahead.

Barry Riley

Growth investors who came in from the cold

Troubled value investors can always try to cheer themselves up by reading the latest research studies telling them just how correct their strategies are. Whether their revived spirits will survive the publication of their 1996 performance numbers is, alas, another matter.

Analyses of long-run UK share price data have recently been produced by Mike Lenhoff of the private client managers Capel-Cure Myers and also by Paul Walton of Goldman Sachs in London.

In the US, James P. O'Shaughnessy's book *What Works on Wall Street* has been selling fast.

All show that value-based stock selection strategies heavily outperform growth styles in the long run. Putting it the other way around, investors have tended to overpay for glamour to a quite extraordinary degree. They have in the past, anyway. But right now it is the growth managers who are smiling.

These studies vary in their methodology. O'Shaughnessy has access to a longer run of consistent data than the UK investigators – 44 years against just over 20. The Walton results are affected by survivorship bias, because the same stocks are followed over the whole period. The US analysis may to a slight degree be distorted by the reverse effect – "look-ahead" bias – because new, successful companies have entered the database. Lenhoff looks only at larger companies. Walton excludes financials.

It is not clear how much the subtle differences in the results reflect these variations or whether there are genuine contrasts between the US and UK markets.

According to Lenhoff, four value styles have worked almost equally well in the UK – low price to sales, low price to cashflow, low price to book value and low price to earnings. High dividend yield works much less well. Curiously, Walton finds high yield to be the clear winner (along with small capitalisation). He does not rate the other value factors very highly at all.

> Low price to book, a very popular style in the US, is revealed to be volatile

As for Wall Street, low price to sales emerges as the clear winner. The inverse growth strategy, *high* price to sales, has worked only very rarely, in speculative bull markets such as that of 1987. High dividend yield, says O'Shaughnessy, only outperforms with big, well-capitalised stocks: for smallcaps it is in fact a negative indicator.

Low price to book, a very popular style in the US, is revealed to be volatile. It performed very well in the 1980s but *high* price to book was successful in the 1950s and 1960s, and chasing book value has looked dangerous in the 1990s.

Perhaps O'Shaughnessy's most surprising statistic is the poor return from so-called growth stocks. A portfolio invested in 1951 in the 50 stocks with the highest p/e ratios, and rebalanced annually until 1994, would have underperformed overall by 4 per cent a year, and was volatile too.

However, Lenhoff suggests that high price to earnings may not in practice be a good proxy for high long-term earnings growth. There may be a lot of short-term cyclical recovery stocks mixed in. Walton's contribution here is that high p/e works over one year but not over three, which again suggests that the market is poor at predicting earnings growth over the longer term.

Incidentally, Walton is particularly dismissive of low price to book as a factor in the UK market. There is presumably a methodological difference from the Lenhoff study, which finds that this style works, albeit with big swings over time. The same applies to low price to sales, which hugely outperformed between 1982 and 1988 but has often lost money, relatively, at other periods.

So much for history. In the UK, the FTSE 350 Higher Yield Index has *under*performed its Lower Yield twin by 8 per cent in 1996 so far. The average UK equity income sector unit trust has underperformed its growth sector counterpart by 5 per cent over the past 12 months.

Time may extend its healing influence. But for many value fund managers time is a luxury indeed.

SE-Banken advances to SKr4.4bn

By Hugh Carnegy in Stockholm

Skandinaviska Enskilda Banken, one of Sweden's leading banks, more than doubled profits in the nine months to end September as it sharply cut loan losses and underlying operations mostly performed strongly.

Operating profits rose from SKr2bn in the same period last year to SKr4.4bn ($666m), near the top end of analysts' expectations. Earnings per share jumped from SKr3.16 to SKr6.33.

The result followed solid earnings growth reported last week by Svenska Handelsbanken, SE-Banken's traditional rival, and cheered investors. SE-Banken shares rose SKr1.50 to close at SKr57 and the banking index on the Stockholm bourse rose more than 1.25 per cent on the day.

The biggest single factor in the profits rise was a 66 per cent fall in loan loss provisions, from SKr3.63bn at the same stage last year to SKr1.23bn. The fall reflected the heavy loan loss suffered last year linked to the failed financial services group, Luxonen.

The bank said lending losses in the first nine months fell to 0.65 per cent of its total loan portfolio – a return to "normal" levels after the credit loss crisis of the early 1990s.

Profits before loan losses slipped slightly from SKr5.67bn to SKr5.65bn. But net interest income rose 10 per cent to SKr5.44bn, mainly because falling interest rates produced an increased yield on the bank's bond portfolio and lower costs of financing problem assets. Mr Björn Svedberg, chief executive, added that there were indications of a break in a long trend of narrowing margins between lending and deposit rates.

Higher levels of equity trading and corporate finance operations – one of SE-Banken's traditional strengths – led to an 11 per cent rise in net commission income, to SKr3.43bn.

A less positive development was an 8 per cent rise in costs from SKr6.95bn to SKr7.47bn, including a 12 per cent rise in staff costs. Mr Svedberg said a programme of technology investment – the bank is spending heavily on preparations for European monetary union and the 'millennium problem', which threatens the dating systems of business computers after the turn of the century – was largely to blame.

The bank's balance sheet was significantly affected by its spin-off in September to its shareholders of Diligentia, the company it had set up to manage the extensive property portfolio taken over during the credit loss crisis as security against bad loans.

At the end of September, SE-Banken's capital base stood at SKr33.8bn, down from SKr36.1bn a year previously. The core capital ratio was reduced from 9.1 per cent to 7.1 per cent. The Diligentia spin-off also reduced the volume of assets taken over against bad loans from SKr15.3bn to SKr2bn.

Commerzbank suffers setback in growth rate

By Andrew Fisher in Frankfurt

Commerzbank, Germany's third biggest commercial bank, yesterday announced a rise of 37 per cent in operating profits for the first nine months to DM1.67bn ($1.1bn), helped by a sharp rise in net interest income and the favourable impact of strong securities markets on commission business.

However, the result was below some analysts' expectations and represented a slowdown from the 48 per cent advance of the first half.

The bank's shares fell 13 pfennigs to close at DM33.97.

Mr Martin Kohlhaussen, chairman, said equities business had weakened in the July-September period after developing well earlier in the year. But he expected a more dynamic fourth quarter.

He also repeated the bank's determination to stay independent in a comment on the debate over possible restructuring in Germany. "We are not buying anyone, nor do we see the likelihood that anyone will buy us," he said, noting that the bank's market capitalisation was around DM15bn. But he expected a further concentration in public sector banking.

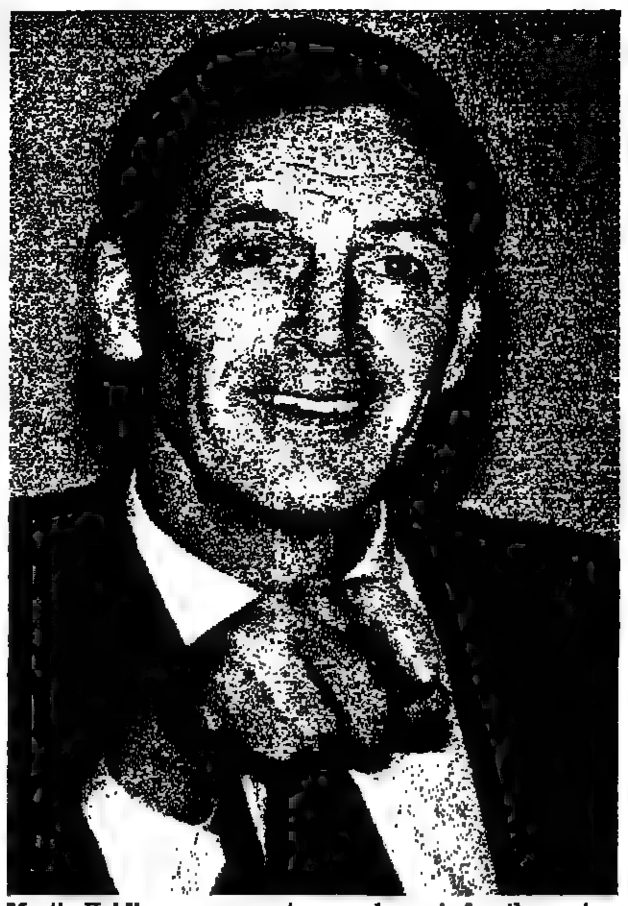
Commerzbank said its pre-tax profit – virtually the same as the operating result, since extraordinary items were minimal – was 49 per cent higher than in the same period of last year. Assuming a 40 per cent tax rate, net income would be around DM1bn.

This would be equivalent to a post-tax return on equity of just over 11 per cent, or nearly 19 per cent before tax. The bank has set itself a target of 15 per cent after tax in 2000. Mr Kohlhaussen also said the cost-income ratio had fallen from 69 per cent a year ago to 64 per cent, "but we still have further to go". Costs were 7 per cent higher at DM4.16bn in the first nine months, a slight slowdown from last year.

Net interest income was 13 per cent higher at DM4.4bn, reflecting a positive trend in treasury business, a rise in total lending and the broader capital base. The interest rate margin was down from 1.47 per cent last year to 1.39 per cent, where it has stabilised in the second half.

Fee income, helped by increased securities commissions (up nearly 40 per cent to DM685m), was 19 per cent higher at DM1.7bn.

Own-account trading activities produced a gain of 11 per cent to DM402m, of which DM104m came from foreign exchange dealings, DM232m from interest-based futures and DM66m from securities trading. Mr Kohlhaussen expected an improved proprietary trading result in the fourth quarter as unrealised gains were booked.



Martin Kohlhaussen: expects more dynamic fourth quarter

Valeo deal hailed as happy coincidence

French corporatism is alive and well. That will be the reaction of many outsiders to yesterday's Valeo deal: one French industrial holding company will buy the bulk of the shares held by another in the much admired car parts manufacturer, which will remain firmly in French hands.

This follows concerns voiced earlier this year by French car industry leaders and others about a possible purchase of the stake by a US parts company. It will also result in the state-controlled Caisse des Dépôts et Consignations nearly tripling its stake in Valeo to 5.4 per cent.

Under the terms of the complex transaction, Cerus, Italian industrialist Mr Carlo De Benedetti's French holding company, is selling its controlling 27.4 per cent interest in Valeo in a deal valuing the parts maker at more than FFr23bn ($4.5bn).

The majority of these shares – amounting to a 20.3 per cent stake in Valeo – are being bought by Compagnie Générale d'Industrie et de Participations, the industrial holding company chaired by Mr Ernest-Antoine Seillière, a Valeo board member. The balance will go to the Caisse de Dépôts, which is adding to its existing 1.9 per cent interest in Valeo, and to a subsidiary of J.P.Morgan, CGIP's adviser on the deal, which will take a 3.6 per cent stake.

Mr Seillière yesterday insisted he was "absolutely not solicited" by the government. His only contact with the administration had been to inform Mr Franck Borotra, industry minister, on October 14 of the state of the negotiations. "If there is a national plot, I don't know about it."

But the government, which has come under intense fire in recent weeks for sanctioning the proposed sale of part of the state-owned Thomson electronics group to Daewoo of South Korea, will no doubt be relieved that a solution has been found that will keep Valeo in French hands.

The help of Caisse de Dépôts and J.P. Morgan turned out to be necessary to square Cerus's desire to sell all its Valeo shares with CGIP's wish to retain a balanced industrial portfolio. "We did not want to be seen as a car components group," Mr Seillière said.

One important consequence of yesterday's deal is likely to be to turn Valeo into a more aggressive pursuer of external growth. As Mr Noël Goutard, Valeo chairman, explained, the change in the company's shareholders will enable it to consider issuing new shares to help finance the purchase of other companies for the first time in about five years.

This increased freedom will mean that it will no longer be obliged to finance growth from cash flow. Mr Goutard indicated the company's dividend policy would take account of this.

Cerus said it would use the FFr6.7bn it hopes, all told, to receive from the deal to reduce debt and make a payment of about FFr100 a share to shareholders.

Mr Michel Cicurel, chairman, said the company still had about FFr3bn of non-strategic assets it was looking to sell after the sale of the Valeo stake. But he said Cerus would also seek new investments. Mr De Benedetti had told board members that he wanted to "reboot Cerus". "After five years of difficulties, Cerus is ready to make a new start," he said.

David Owen

Talks may resolve future of Traub

By Peter Marsh

A deal to create Europe's biggest machine tool company with annual sales of about DM1.3bn ($859m) could emerge from talks between Traub and Gildemeister, two of Germany's largest machine tool companies.

However, the move could be scuppered by separate discussions in which Cincinnati Milacron, the large US industrial equipment maker, has expressed interest in acquiring all or part of Traub.

The talks have been sparked by severe financial problems at Traub, which has entered into the early stages of administration after running up debts estimated at more than DM300m.

Traub said yesterday it was optimistic. "There will definitely be a solution," it said.

If either of the plans goes ahead, the resulting company could play a pivotal role in the reshaping of the DM12bn-a-year German machine tool industry.

Germany's is the biggest tool sector in Europe, but it has been financially stretched for the past five years as a result of high labour and plant costs and stiffer international competition.

A deal between Traub and Cincinnati, the US's fourth-biggest machine tool producer, would provide Cincinnati with a long-sought selling and production arm for machine tools in continental Europe. The company last year had revenues of $1.6bn, of which a quarter was from machine tools.

Agreements over Traub's future are tied to discussions over debt repayment by the 14 banks, led by Deutsche Bank, which until last week were owed DM230m by Traub.

It is thought that for any deal to proceed, the banks will have to write off a substantial part of the money they are owed by Traub, on top of the DM100m they have already agreed to waive in the past week.

As a result of discussions concerning Traub's status of provisional administration, which it entered into last month, the banks have agreed in principle to reduce the company's debt liability to DM180m.

Mr Olaf Tölke, an analyst at Merrill Lynch, the US bank, said he thought the most likely outcome was an all-German solution to Traub's problems, involving an alliance between Gildemeister and Traub.

However, such a venture would almost certainly require the agreement of the German cartel office. Gildemeister, with annual sales of DM740m, is Germany's second-biggest tool company, while Traub, with annual sales of DM560m, is the fourth biggest.

A link with Gildemeister would not be a soft option for Traub. Gildemeister is also heavily in debt and facing competition from low-cost machine tool suppliers, especially from the Far East.

In another development, Heckert, a Traub subsidiary based in Chemnitz, eastern Germany, last week went into receivership as a result of its financial problems. Traub has announced that Niles and Heller, two German machine tool companies, are both interested in taking over Heckert.

EUROPEAN NEWS DIGEST

Marchionne chief at Alusuisse-Lonza

Mr Sergio Marchionne, a 44-year-old Canadian, has been named as the next chief executive of Alusuisse-Lonza, the Swiss industrial conglomerate. Mr Marchionne joined Alusuisse in 1994 after its $555m acquisition of Lawson Mardon, the Toronto-based international packaging group.

His rise to the top of the Swiss company, which employs 31,000 people and has an annual turnover of SFr7.5bn ($5.9bn), has been helped by the departure over the past two years of two potential rivals. Mr Marchionne took over as Alusuisse chief financial officer in January 1995 after Mr Georges Schorderet moved to be Swissair chief financial officer, and in August 1995 Mrs Dominique Damon, Alusuisse deputy chief executive, left the company.

Analysts welcomed Mr Marchionne's appointment, saying it reflected the company's growing international stature. He will take over in April 1997 when Mr Theodor Tschopp, 59, replaces Mr Hans Jucker, 69, who is retiring as chairman. Mr Marchionne's role as chief financial officer is being taken by Mr Urs Fischer, 40, who joined Alusuisse-Lonza in 1987 as a financial analyst. Mr Peter Kalantzis, 51, head of the group's chemicals business, is moving to the newly created post of head of corporate development and will be chairman of Lonza.

William Hall, Zurich.

Spain starts sell-off drive

A much-heralded privatisation drive by Spain's centre-right government has got under way with an agreement to sell a loss-making mining company in the south-western Huelva region to Navan Resources of Ireland. The Irish company said it would pay $3.43m for Minas de Almagrera, as well as assuming $5.3m of the company's debt, under an agreement with the Spanish industry ministry's Sepi portfolio unit. Sepi said the sale was the only means of salvation for Almagrera, which mines copper, lead and zinc. The company's modern metallurgical complex would be used to process ore from Navan's own operations at nearby Aguas Teñidas, allowing considerable cost reductions, it said. Almagrera posted a loss of Pta600m ($4.7m) in 1995 on turnover of Pta4.7bn. It has losses in the past four years of more than Pta5bn.

David White, Madrid

KPN raises TNT stakes

KPN, the Dutch postal and telecoms group which is mounting a A$2bn (US$1.57bn) friendly bid for Australia's TNT, yesterday announced that it had acquired a further 2.3 per cent of its target's ordinary shares, and another 3.7 per cent of the converting preference shares. This takes KPN's stake in the transportation group to 19.6 per cent of both classes of shares.

Nikki Tait, Sydney

VW expects strong year

Volkswagen, the German automotive group, said it expected clearly higher earnings in 1996 compared with a net profit of DM336m ($222m) in 1995. But the company reiterated that it was not satisfied with the current return on sales. The shares closed up DM2.25 at DM615.50. VW posted net profit in the first nine months of DM465m, up from DM165m a year earlier. VW attributed the earnings growth to the success of the parent company, its Audi unit, its Brazilian subsidiaries, success in the Asian-Pacific region and at its financing and financial services division. Losses at its Seat unit and in North America had declined from year-ago levels.

Cash flow in the nine-month period including leasing activities, rose 8.9 per cent, from DM6.91bn to DM7.52bn. Excluding leasing, it climbed 6.5 per cent to DM4.60bn. Fixed-asset investment in the period stood at DM5bn up 64.7 per cent.

AFX News, Wolfsburg

Adecco shrugs off French fall

Adecco, Europe's largest temporary employment concern, suffered a 4 per cent drop in the third-quarter revenues of its French business, which accounts for almost half the group total. However, a strong performance in North America and the Asia-Pacific region offset the downturn in its most important market and enabled it to increase group revenues in the third quarter by 6.7 per cent, to SFr2.36bn ($1.86m).

Adecco was formed this year by the merger of Adia, the world's third biggest temporary employment agency, and Ecco, the market leader in France. The group said that in the third quarter the temporary staffing market in France fell 7 per cent, so the 4 per cent rise in Adecco's French revenues indicated it was gaining market share. Apart from France, revenues in the rest of Europe rose 23 per cent in the latest quarter, to SFr595m. The only other weak spot in Europe was Germany, where revenues fell 4 per cent. Mr John Bowmer, Adecco chief executive, said he was pleased with the new group's top-line growth, given the tough economic environment in France, Germany and Switzerland.

William Hall

Sol Melia earnings up 35%

Sol Melia, the recently floated leisure group, posted net profits after minorities up 35 per cent, from Pta2.35bn to Pta3.17bn ($24.9m) for the first nine months to September 30. Pre-tax profits rose from Pta3.39bn to Pta4.49bn on sales up from Pta6.66bn to Pta7.95bn. Sol Melia said profit from ordinary operations climbed 27.1 per cent in the nine months to September 30, from Pta3.5bn to 4.48bn. Operating cash flow rose 20.6 per cent, from Pta3.62bn to Pta4.37bn.

AFX News, Madrid

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Why Weinberg prefers autonomous energy to ersatz synergy

Pinault Printemps chief aims to overcome flat consumer spending with overseas expansion and bright ideas, writes **Andrew Jack**

Serge Weinberg has an intriguingly unfashionable view of his role as head of Pinault Printemps Redoute, the sprawling French retail group. He has little faith in the importance of creating synergies between the companies he controls, preferring to encourage their autonomy.

Although he concedes that some activities – such as purchasing and information technology – may be best conducted centrally, he says that he prefers his different businesses to develop links with each other voluntarily and in response to their needs.

"Synergy is the cherry on the cake," he says. "It is formidable when it is the result of people working on the ground. It makes no sense if it comes from an artificially created structure. Our quality as a group is to break down bureaucracy, delegate responsibility and encourage entrepreneurship."

It is a message worth hearing from someone who, since he took over the group in February 1995, has steadily edged up sales to FFr38bn ($7.42bn) and substantially increased net profits – FFr748m for the first six months of this year – while cutting debt and restructuring his group.

All this has been achieved at a time of general gloom in the French retail sector. It has suffered from sluggish consumer spending, the aftermath of the terrorist attacks and strikes that hit the country at the end of last year. Moreover, new measures designed to protect small shopkeepers, by clamping down on new developments, notably in the suburbs, have been at the expense of larger rivals.

"We operate in an extremely complex mix of different markets," Mr Weinberg says. "Retailing must be close to our customers and very reactive. The paradox is that our role at the group level must be to encourage autonomy in our operating businesses."

He has taken a number of initiatives to put his principle into practice. Executives in the different businesses have created informal networks to exchange ideas on computing and marketing. One result is the first mail order catalogue by Fnac, the group's books and records chain, inspired by the operations of its Redoute telephone sales company.

Serge Weinberg

He has also recently created a "development club" in conjunction with a banking partner, with initial capital of FFr25m. Funds can be lent to support new ideas, whether from employees or those outside the group.

Another example: after deciding that there was a niche to be exploited in the sale of top-of-the-range lingerie, the group did not attempt to develop it within one of its existing retail chains. Instead, it approached a businessman outside the group with a reputation in the industry. The group is launching a new series of high street outlets in France this month which report directly to the holding company.

The PPR chairman says: "You can't go on making eternal productivity gains with a fixed cost structure." His attempt to foster creativity is one reaction, given his belief that France will continue experiencing low economic growth.

"I am struck by the number of people who are waiting for economic recovery," he says. "I don't think there will be a strong upturn." He adds that he loses nothing by developing his strategy in the absence of any salvation which would be bought by a surge in consumer spending.

Within France, he is nevertheless placing emphasis on increasing productivity, as well as improving stock management. He also highlights the important and fast growing scope for consumer credit cards in PPR stores, which provide a wealth of information on customer habits which can be used for marketing.

They are also extremely profitable, accounting for a substantial part of the FFr293m first-half profits from its involvement in non-operating businesses such as Finaref, which deals with credit purchases for customers of Redoute.

Regarding the government's clampdown on new shops, Mr Weinberg says the way the country's suburbs have been defaced by commercial development in the last few years is "disgraceful", but argues the real debate now is how to preserve the activity in town centres. That requires, not a ban on new building elsewhere, but rather a combination of changes to property law, taxes, housing and planning law designed to make the centres more attractive.

Given the difficulties of the domestic market, Mr Weinberg also stresses the need for further international diversification of the group. He says this has been the focus of all group expansion, including the acquisition of full ownership of the Fnac store in Belgium and new stores in Madrid and Barcelona, as well as Scoa, the pharmaceutical products distributor, in Africa and Rexel, the low voltage electrical equipment retailer, in Germany.

By 2000, his objective is to generate 40 per cent of sales outside France, compared with only 28 per cent today.

Wedel looks to salty snacks for future growth

By Christopher Bobinski in Warsaw

Wedel, the listed Polish chocolate and salty snacks producer controlled by PepsiCo of the US, is struggling with international rivals to maintain market share.

The challenge from Nestlé of Switzerland, Mars of the US and Cadbury Schweppes of the UK in one of Europe's most fiercely contested confectionery markets is forcing the company to look to salty snacks production for future profits growth.

Net profits this year are set to grow by just 4 per cent to 28m zlotys ($9.95m) with sales ahead by 43 per cent on last year to 662.4m zlotys.

Third-quarter figures issued this week are in line with the company's year-end predictions which will give Wedel an earnings per share figure of 4.75 zlotys. That would be 17 per cent down on last year's figure.

Wedel's net sales rose 45 per cent to 451.8m zlotys as net profits increased 18 per cent to 19.9m zlotys.

However, the company predicted a stronger performance next year when net profits were expected to grow by 63 per cent to 45m zlotys.

This has helped lift Wedel's stock on the Warsaw Stock Exchange.

Since January this year the share price has risen from a low of 83 zlotys to its current 140 zlotys level, giving Wedel a price:earnings ratio of 28.

This 70 per cent rise matches the 74 per cent growth in Warsaw's WIG index over the same period.

Currently Wedel holds about a fifth of the Polish chocolate market and up to a third of the sweet biscuit market. These, together with wrapped sweets, account for 77 per cent of group sales.

Salty snacks, which were brought into production after PepsiCo acquired a controlling interest in Wedel five years ago, generated 15 per cent of sales revenue in 1995.

Now the company appears determined to boost profits by increasing snack sales next year and developing its snacks output in the face of the threat to its once unmatched position as Poland's premier chocolate brand.

PepsiCo, which holds a 70 per cent share in Wedel – whose market value is 813m zlotys – has said it plans to invest $152m in the company by 2001.

In that year sales are expected to be double the planned 868m zlotys net sales figure for 1997.

With Poland's market for chocolates expected to grow by 5 per cent a year, such sales growth will have to come from a rapid development of snack revenues. It is here that the greatest share of investments in the next four years will go.

PepsiCo has already invested more than $56m in building a snacks plant and a distribution network at Wedel since 1991.

The US group currently controls about 20 per cent of Poland's salty snacks market where its main competitors are Bahlsen from Germany, Star Foods, a local Greek owned producer, and Chio chips, a joint venture between Convent, another German snack food producer, and ITI, a local media-to-food group.

COMPANIES AND FINANCE: THE AMERICAS

Tenneco unveils $3bn acquisition plan

By Tim Burt

Tenneco, the US conglomerate, yesterday unveiled plans for a $2.5bn-$3bn acquisition spree to double the size of its packaging and motor components interests.

The company – currently in the process of demerging its shipbuilding and energy divisions – said it was in talks with a number of target companies, particularly in the European plastic packaging industry.

Mr Dana Mead, chairman, said the group could fund acquisitions of up to $2bn using existing reserves and borrowing facilities, and would issue paper for further deals.

He highlighted Tenneco's international packaging and cartons business as the most likely area for bolt-ons.

"We want to lift the sales in international packaging from about $300m to $800m; we will do so almost exclusively by acquisition and now is the time," he added.

Some industry analysts identified the packaging arm of BTR, of the UK, as a potential target, while others suggested Tenneco could be interested in underperforming companies such as Rexam of the UK or Arjo Wiggins Appleton, the Franco-British group.

Mr Mead refused to name companies it was talking to, and warned that a deal might not take place until the spring. Nevertheless, he hinted at a new business leg for Tenneco Automotive, one of the world's largest exhaust and shock absorber manufacturers.

The group – which cast its eye over Lucas Industries earlier this year – was said to be keen to bolster its after-market operations and establish a presence in automotive electronics.

Mr Mead was speaking in London, where Tenneco yesterday launched a series of meetings with institutional investors ahead of the $4.6bn demerger of its energy division, which is being sold to El Paso Energy, and the spin-off its Newport News Shipbuilding business.

The terms of the demerger, expected to involve one-off charges of up to $400m, were approved earlier this week by US tax authorities. Of the charges, about $250m was related to restructuring $4bn of corporate debt, while the remainder was linked to stock-sharing, pensions and advisory fees.

Although he admitted the exceptional costs would dent Tenneco's fourth-quarter profits, Mr Mead said: "It's like Wagner's music, not as bad as it sounds – particularly given the scale of the transformation we are undertaking."

Moreover, he said Tenneco would consider rewarding investors with a share buy-back once the demerger had been completed.

Senior company officials – advised by Lazard Brothers and Morgan Stanley – predicted such a buy-back would avoid excessive shareholder dilution in the event of issuing paper to fund an acquisition.

Since 1994, the company has bought $770m of its own stock and spent $2.4bn on acquisitions.

Mr Mead said the company intended to use institutional meetings in London and 15 US cities to persuade investors that it was abandoning the conglomerate tag, which has dogged the share price in the past two years.

Bristol-Myers refocuses on drugs research

The US group is redoubling its efforts to develop new products

Bristol-Myers Squibb has a problem: in spite of being one of the world's largest pharmaceuticals companies, its record of developing new drugs and bringing them to market is relatively poor. So the company's decision to recruit a new head of pharmaceutical research last week may be the next best thing to a drug discovery.

The appointment of Dr Peter Ringrose to Bristol-Myers is seen as an important step for the US drugs company, according to analysts, because he has a strong record in developing new products.

As head of Pfizer's UK research facility in Sandwich, Kent, he helped bring to the market some of the big-selling drugs which in the past 10 years have catapulted Pfizer from an also-ran into one of the most successful pharmaceutical companies in the world.

"There is no question that Pfizer's Sandwich group has been exceptionally productive," said Mr Kenneth Kulju, an analyst at UBS Securities.

Bristol-Myers has brought some drugs through its pipeline, but not the blockbusters produced by some of its rivals; and its best-selling lines recently have been products licensed in from other pharmaceutical or biotechnology companies.

"If you look at all their major drugs, they have all been licensed-in," says Mr Hemant Shah, an analyst at HKS, the independent research firm. "They need to develop a more commercially driven research effort."

While Bristol-Myers is enjoying strong growth of licensed products, it is dangerous to depend on products from other companies, argues Mr Shah.

Competition to buy in drugs is fierce, making it an increasingly expensive option. Moreover, Bristol-Myers is spending more than $1bn on its research effort this year – a high cost base to cover if few successful new drugs are being produced.

There are some potentially interesting products down the road for Bristol-Myers but "the pipeline is considered to be somewhat early", according to Mr Kulju.

Concern about a lack of new products in the pipeline has been heightened, because Bristol-Myers's biggest-selling pharmaceutical product, Capoten, lost patent protection earlier this year, leaving a potential hole in the company's revenues.

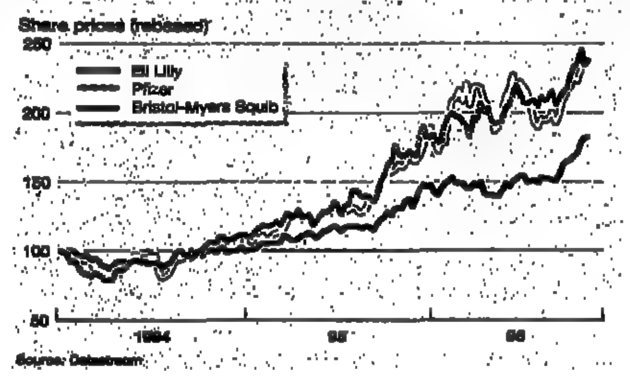
In fact, the impact on sales has been less dramatic than some had feared, because its effects were mitigated by increased sales of licensed products, such as Taxol, a cancer drug, sales of which rose 34 per cent in the third quarter of 1996, relative to the previous year.

Still, at a time when the top US pharmaceutical companies are producing earnings growth rates well into double-digits in spite of falling prices, Bristol-Myers managed to increase after-tax earnings by only 9 per cent in the third quarter.

But the company has ambitions to improve its performance. In a letter to shareholders earlier this year, incoming chief executive officer Mr Charles Heimbold set a goal of obtaining approvals for at least 10 new chemical entities – a genuinely new drug – by 2000.

Peter Ringrose: has strong record developing new products

Bristol-Myers Squibb: looking for drugs blockbuster



Source: Datastream

He also said he expected the company to launch new products in its non-pharmaceutical businesses, which include consumer products such as the Clairol haircare range. Furthermore, the company has increased its drive to cut costs under a new chief financial officer, Mr Michael Mee.

The transformation of Bristol-Myers's research effort cannot happen overnight. Analysts say the impact of Dr Ringrose's arrival may not be felt for five years because of the time required to discover and develop new drugs.

But if Bristol-Myers fails to improve its new product record, it will find itself in an increasingly uncomfortable position.

The concentration of market share among the world's largest pharmaceuticals companies in recent years has already forced some of those under pressure to join forces.

Those who have chosen to go it alone, like Pfizer and Eli Lilly, have already shown their strength. For the moment, BMS appears something of an anomaly.

Tracy Corrigan

KPMG revenues rise 8% in year

By Jim Kelly, Accountancy Correspondent

KPMG, one of the Big Six global accountancy groups, reported an 8 per cent rise in worldwide revenues for the year to September 30, from $7.5bn the previous year to $8.1bn.

The growth rate was seen as mildly disappointing. "We have got to be growing faster," said Mr Jon Madonna, KPMG chairman. "I was hoping to see better but it is acceptable."

The firm had invested "hundreds of millions" of dollars in information technology and developing new products for clients, he said. This included about $500m a year on technology and more than $100m on products. As a result the firm was looking to improve growth over the next year.

Andersen Worldwide, the umbrella organisation for Arthur Andersen and Andersen Consulting, has led the results announced to date far this year, with revenue growth at 16 per cent in 1996 to $9.4bn.

Mr Madonna said he saw further consolidation among the big accountancy firms, but said KPMG would grow mainly from within rather than through acquisitions.

He said all sides of the business had performed well over the year, but stressed that significant growth in revenues was likely to come from the consulting side of the business rather than the traditional backbone of auditing and tax.

"If you look at where the great opportunity is, it's on the consulting side," Mr Madonna said.

The investment and strategic moves KPMG had made had ensured it would be in a strong position for the future. "The road we are on is the right road," he said.

Mergers and acquisitions activity reaches new high

By John Authers in New York

International cross-border mergers and acquisitions had already reached record levels for the year before the proposed merger between British Telecommunications and MCI, according to a survey published yesterday by KPMG Peat Marwick, the accountancy firm.

In the first nine months of the year, purchasers spent $181.7bn on acquisition targets whose parent companies were based in a different country. Activity picked up substantially in the third quarter, with the total volume of business by the end of June having been 6 per cent below its level for the first six months of 1995.

The previous record for the first nine months of the year, set in 1995, was $173.7bn. It means that global cross-border mergers and acquisitions activity is now double its level for the same period of 1992, when the total volume of business was $90.1bn.

However, the total number of deals dropped significantly, from 4,536 to 4,016, with buyers concentrating on large targets.

Mr Steve Blum, a corporate finance partner with KPMG, said conditions for cross-border deals had never been better. "Low worldwide interest rates and lofty global stock markets, which lower financing hurdles, together with healthy economic conditions in most of the developed world, helped to fuel deals," he said.

However, KPMG also found that acquirers were becoming more selective, with sharp slowdowns in transactions targeting China and India. This was part of a "flight to safety" with companies finding less incentive to take the risk of investing in emerging nations in a search for higher returns.

The greatest volume of mergers and acquisitions activity was between the US and the UK. UK companies invested $11.42bn in US companies during the first nine months, in 134 separate deals. Since then, the US has seen both the BT deal and the agreement by Invesco, a UK fund manager, to pay $1.6bn to buy AIM, a privately held US money management business.

This was almost exactly reciprocated by US companies which invested $11.67bn in the UK, significantly more than last year's $9.16bn.

There was also a sharp increase in US activity in Latin America. US companies invested $2.4bn in Venezuela alone (up from $31m), while the region as a whole attracted investment of $10.04bn, 59 per cent higher than in the equivalent period of 1995.

This was almost back to the peak of 1994, when 210 deals brought $11.12bn into the region.

October IPOs top 1993 record

The number of initial public offerings (IPOs) in a single month hit a record in October, according to the latest numbers released by Securities Data, Tracy Corrigan writes.

A total of 106 companies issued public equity for the first time last month, breaking the previous record of 100 set in November 1993. That figure includes all new issues in the US, including closed-end funds and real estate investment trusts.

In terms of money raised, last month's $6.3bn proceeds fell short of record levels. About a third of companies going public in October were classified as high-tech.

So far this year, 700 companies have gone public in the US market, raising $41bn, according to Securities Data. If activity continues apace, the IPO market is on track to beat the 1993 record this year.

The Securities Industry Association expects that 1996 will set records for equities underwriting and trading in the US market. "Many people thought 1993 was a unique year, and one the industry would have difficulty matching," said Mr Jeffrey Schaefer, SIA senior vice-president for economic research. "This year's strong equity market has made it more conducive for firms to raise equity capital rather than debt to finance expansion," he said. The climate has also been helped by heavy inflows into equity mutual funds.

NatWest to buy out Wheelock venture

By Louise Lucas in Hong Kong

National Westminster Bank of the UK is to buy out Wheelock, the Hong Kong conglomerate, from its Hong Kong investment banking joint venture after just two years in partnership.

NatWest said it aimed to step up Wheelock NatWest's activities in trading equities and equity derivatives, but these more risk-oriented businesses would need more capital and tighter regulation. That could be more easily handled in a wholly owned vehicle, where one entity has full control, the bank said.

Mr John Howland-Jackson, Asia Pacific chairman of NatWest Markets, said tightened regulation had made the split inevitable: the bank is regulated by the Bank of England while Wheelock is unregulated.

"There is, as you build a significant business (in securities and especially derivatives trading), a perception that there could be greater difficulty in controlling all those risks if you are a joint venture, if you do not own it all yourself," he said.

Mr Nick Sibley, managing director of Wheelock Capital, the Wheelock arm responsible for the joint venture, said of the split: "It's not the best option (for us), but it was really the only option. The only sensible option."

But Hong Kong analysts, pointing to Wheelock's hapless record with partners, reckon the split may have been forced by a falling out.

NatWest has been building up its other investment banking activities in Asia, with a recent expansion of its equities business in Tokyo, and admitted that it had "outgrown" the partnership with Wheelock.

Wheelock prides itself on its role as a "bridge between East and West". The investment banking venture was its most high profile tie-up.

Its remaining venture, with Foster's, the Australian brewery, in China, was initially capitalised at US$28m. A retailing joint venture with Virgin, the UK aviation and entertainment group, never got off the ground.

One broker said that the Wheelock group is generally held in poor regard in Hong Kong. "You only need look at the Hong Kong airport railway projects: no-one is involved with Wheelock or affiliate Wharf. All the other developers are in consortia – it's because they are much more amicable between themselves."

The joint venture had already absorbed an investment of US$125m from the two shareholders.

Neither side would disclose the payment being made by the NatWest group, which will appear in Wheelock's accounts as an exceptional item next year.

The investment management side of Wheelock NatWest, whose purpose came into question after NatWest's acquisition of the Gartmore fund management group, was shut down last month.

NatWest Markets, the global corporate and investment banking arm of NatWest Bank and Wheelock's erstwhile partner in the pan-Asian joint venture, is expected to complete the acquisition of Wheelock's 50 per cent stake by the end of the month, pending approval from the two partners' boards.

Wheelock NatWest, which formally opened its doors in the second half of last year, expects to become profitable next year. It was independently ranked fifth in Hong Kong initial public offerings in 1995.

Sony Music tumbles 53%

By Gwen Robinson in Tokyo

Sony Music Entertainment, the recorded music arm of Sony, yesterday announced that first-half recurring profit plunged 53.1 per cent to Y4.7bn ($41m).

It blamed increased costs of advertising and marketing and the delayed release of new compact disc titles during a management reshuffle.

Sales in the first half to September fell 12.1 per cent to Y46.6bn, with sluggish demand for Sony Music's domestic and foreign CD and cassette tape titles, although sales of games and image software were strong. Net profit declined 45.4 per cent to Y3.2bn.

The company will pay a Y17.5 interim dividend, unchanged from a year earlier, said Mr Kazutoshi Shiraishi, senior managing director.

For the year to March, Sony Music expects a recurring profit of Y12.6bn, down 39.9 per cent. Sales are likely to fall 9 per cent to Y104.2bn, amid a downturn in demand for CDs and cassette tapes.

The company's total number of new titles for the full year should come to just over 1,000, down about 200 from the previous year.

Net profit for the full year is expected to decline 36.4 per cent to Y7.3bn.

However, the company plans to pay an annual dividend of Y35 a share, Mr Shiraishi said.

Newcrest puts rejection behind it

Spurned by Normandy, the gold miner is looking to exploit its exploration skills

It was inevitable that the battle between Normandy and Newcrest, two of Australia's biggest gold mining groups, would be described as a clash of personalities.

Lined up against each other were Mr John Quinn, Newcrest chief executive, and Mr Robert Champion de Crespigny, Normandy founder and chairman – both accountants turned mining executives.

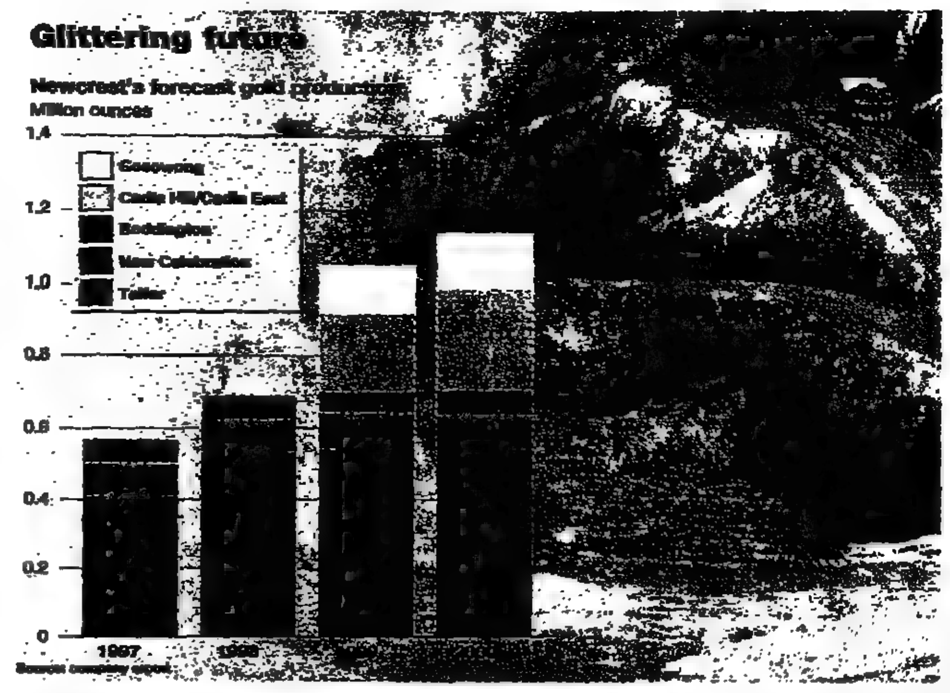
The two had crossed swords in 1991, when Normandy attempted to gain control of Newmont Australia. Instead, Newmont was merged with BHP's gold interests to form Newcrest.

One newspaper went so far as to illustrate its story with a drawing of Mr Quinn holding a pistol to the head of Mr de Crespigny. This was the wrong image. With hindsight, it would have been more appropriate to have shown Mr Quinn shooting himself in the foot.

Mr Quinn says ruefully: "We didn't achieve our objectives and the investment community was not wildly enthusiastic about what we were trying to achieve."

Newcrest wanted a merger with Normandy to create an Australian company ready to take on the biggest competitors in the world.

Newcrest's timing, however, was far from perfect. Mr de Crespigny was already putting together a merger of his own, drawing his complex mining interests into one organisation under the Normandy banner.



Newcrest stepped in at the last moment and sank that deal in the hope that it could push forward its own merger proposals.

It was able to halt the Normandy group merger because it had acquired a 14.9 per cent stake in Normandy and 10.5 per cent of Mr de Crespigny's Poseidon Gold (PosGold), mostly from Minorco, an offshoot of the Anglo American-De Beers group of South Africa.

For Newcrest, the idea of a merger with Normandy seemed logical, but neither Normandy nor many Australian investors liked the idea.

"The investment community did not like us replacing the certainty of the Normandy merger with the uncertainty of the one we proposed," Mr Quinn says.

"Normandy didn't want the transaction and made it quite clear they didn't want it."

Ultimately, Newcrest could not persuade Normandy or the important shareholders in both companies, and was forced to withdraw in June.

Mr de Crespigny completed his merger at the second attempt and Newcrest was left with a big loss – more than A$100m at present values – on the A$470m (US$370m) it paid for its Normandy and PosGold stakes.

"Now," says Mr Quinn, "we have to do a job of conveying to the investment community that Normandy was not the whole story. We need to refocus investors on what our future will be."

The present jewel in Newcrest's crown is the Telfer gold mine, in Western Australia. Telfer produced 365,000 troy ounces of gold in the year to end-June, and this is scheduled to rise to nearly 600,000 ounces in the next three years.

Mr Quinn is also excited by Newcrest's two development projects: Cadia Hill in New South Wales, and Gosowong, in Indonesia.

Cadia, due to start up by August 1998, has a resource so far of 7.2m ounces of gold and 556,000 tonnes of copper. Annual output of 293,000 ounces of gold and 24,000 tonnes of copper is expected.

Gosowong is much smaller, but is important as Newcrest's first project outside Australia. For capital expenditure of about A$70m, Newcrest sees Gosowong producing 150,000 ounces of gold a year, possibly from the middle of 1998.

Newcrest will be producing about 1.2m ounces of gold by 2000, says Mr Quinn. Last financial year its output was 582,000 ounces, down from 649,000 in the previous 12 months.

In future, says Mr Quinn, Newcrest will rely principally on exploration skills, rather than acquisitions, to generate growth. "Certainly some international investors prefer large, liquid gold stocks. But there are other criteria, such as growth in production. And we offer that by going from 600,000 ounces a year to 1.2m ounces in two years' time."

Kenneth Gooding

Move to new technology hurts Nintendo

By Michiyo Nakamoto in Tokyo

Nintendo, the Japanese maker of video games, yesterday unveiled a 53 per cent drop in parent recurring profits in the first half, as users shunned the last generation of Super Nintendo games machines and sales of software plummetted.

The company said that the drop in its 16-bit Super Nintendo sales was in line with expectations, amid the transition to next-generation technology, which has been brought to the market in the form of Nintendo 64, an advanced 64-bit games machine.

Recurring profits dropped more than half, from Y63.9bn to Y30bn ($263.6m), while sales for the first half fell slightly, from Y135.2bn a year ago to Y130.2bn.

Nintendo kept its full-year forecast more or less unchanged, at recurring profits of Y85bn and net profits of Y48bn. Sales, however, are now expected to be slightly higher than initially forecast, at Y340bn, because of an increase in production of the Nintendo 64.

Nintendo said that the Super Nintendo machines – known as Super Famicon in Japan – and software had suffered from the transition to the advanced format. Sales of software for the 16-bit machines plunged from 13.99m units in the first half last year to 5.2m.

The company had not been able to overcome the drop in Super Nintendo sales with higher sales of the Nintendo 64. Although the new machine has been popular – Nintendo sold 1.16m units in Japan and 800,000 units in the US – there have been few software titles to support greater shipments.

Nevertheless, Nintendo expects to ship a total of 6m of the 64-bit games machines in the full year and 12.3m software units. Demand has been extremely strong in the US, where the company sold 400,000 machines in the first week of its launch.

The company is also likely to be supported by currency gains amid the yen's weakness against the US dollar, said Mr Hironobu Sawake, industry analyst at Nikko Research Center in Tokyo.

The number of software titles available for the Nintendo 64 is to rise to 10 in Japan by the end of the year and eight in the US. Nintendo is also looking to strong sales in Europe when the machines are launched there on March 1.

"Titles will increase without a doubt, and when that happens they will be able to achieve firm profits," Mr Sawake said.

Mario Cart, a popular game that is available in the earlier format, is expected to be one of the upcoming titles that will support strong demand, he notes.

Nevertheless, Nintendo still faces strong competition from Sony in particular. Among the competing advanced-generation video games machines, Sony's 32-bit PlayStation is proving to be the strongest seller yet in the Japanese market, according to Mr Sawake.

Star Mining and JCI in finance deal

By Kenneth Gooding, Mining Correspondent

Star Mining, a small Australian listed company that has been struggling to develop Sukhoi Log in Siberia, Russia's biggest known gold deposit, hopes to enlist JCI, the South African mining group, to provide finance and expertise.

The companies have signed a Memorandum of Understanding which will provide the basis for JCI to buy up to 30 per cent of Sukhoi Log for US$250m and to manage the project.

The deal is in line with JCI's policy of finding opportunities to generate production outside South Africa. Mr Bill Nairn, chief executive, said Sukhoi Log could "be one of the world's leading gold producers into the next century".

Sukhoi Log has reserves and resources of 31m troy ounces of gold and four "satellite" deposits are estimated to contain 4.2m ounces.

Star also has mining rights to an area of 105,000 sq km, about the size of England, in Russia's Irkutsk Province.

At present Star envisages Sukhoi producing about 600,000 ounces a year in an initial phase, and eventually about 2m ounces. However, the capital cost of the first phase alone is likely to be about $600m.

Under the terms of its agreement with the Russian government, Star was also obliged to contribute $200m over the next 18 months, to arrange for appropriate debt funding and guarantees essential for completion of the first phase.

If the JCI deal is sealed, all these conditions will be met and Star would get back the $50m it has spent so far.

Star's share of Sukhoi Log could be reduced from 34.88 per cent to 4.88 per cent as a result of the arrangement but Mr Rudolph Agnew, Star chairman, said yesterday that negotiations were taking place with "various Russian parties" to increase substantially Star's interests in Sukhoi Log and a number of the satellite deposits.

The Russian state, with 38 per cent, and 9,600 employees, with 17 per cent, are the other main shareholders.

Not the least of Star's difficulties has been the fact that Russia's Federal Security Service, successor to the KGB, refused the company access to critical data because gold reserves have always been a state secret.

Mr Victor Chernomyrdin, Russian prime minister, signed a decree removing the secrecy restrictions in September.

Mr Agnew said this made negotiations with JCI much easier. He said: "Although our agreement with JCI is subject to various approvals on both sides, I see it as an important step forward in our determination to bring the Sukhoi Log and other projects to development."

First-half setback at Japan Energy

By Gwen Robinson in Tokyo

Japan Energy, a leading mining development and petroleum refining group, announced a 23.5 per cent decline in interim recurring profits to Y944m ($8.3m) for the half-year to September.

The company said the fall was due to increased price competition following sweeping deregulation of Japan's petroleum industry.

Although overall sales rose by 9.5 per cent to Y691.42bn, rising crude oil prices and a deterioration in the profitability of the petrochemicals division wiped out some Y12bn in profit. The rise in crude oil prices is expected to reduce recurring profit by a further Y3bn in the second half, the company said.

Cost-cutting measures worth some Y10bn and foreign exchange gains of Y1.4bn failed to offset the first-half fall in recurring profits. However, a surplus of some Y4bn from the sale of securities holdings helped net profits soar by 61.5 per cent to Y1.62bn, with earnings per share rising to Y1.49 from Y0.92 a year earlier.

For the full business year, Japan Energy expects recurring profit of Y6bn, down Y2bn from a revised estimate made in August, because of the delay between increases in crude oil prices and the time they are reflected in product prices, said the company. The result, however, would come in higher than the previous year's Y5.8bn.

The petrochemical division, which has suffered from falling demand and increases in other raw materials prices, will just break even for the full year after recording Y8bn in profit for 1995-96.

However, the company said it intended to make up the shortfall through restructuring measures worth some Y12bn annually, the officials said.

Sales for the full year are forecast at Y1,500bn, up from last year's Y1,353bn, on an in-house dollar exchange rate of Y110 and on estimates that crude oil prices will average $21 a barrel.

Net profit is expected to total Y6.1bn, or Y5.48 a share. The company will not pay an interim dividend, but expects to make an annual payout of Y5 a share.

In trading on Tokyo's stock market yesterday, Japan Energy fell Y2 to close at Y383.

Li lays foundations for second fortune

After the sale of Star TV, Pacific Century is turning towards financial services

Richard Li has been biding his time, plotting his moves and preparing to pounce. The Hong Kong chairman of Pacific Century is steadily laying the foundations of a second fortune with the booty from his first – the sale of Star TV, the Asian satellite broadcaster, to Mr Rupert Murdoch's News Corp.

It is a hard act to follow. Having built Star since its foundation in 1990, he sold it for just under US$1bn, with the final tranche disposed of last year. It was a big deal for any businessman. But Mr Li was just 23 when Star was born. The question is, can he do it again?

Now aged 29, Mr Li appears to be taking a more measured approach. "More risk averse" is how he describes his strategy at Pacific Century, which he formed in 1993.

Gone are the glitzy businesses of television and telecoms. Instead he is building his new ambitions on property, financial services and insurance.

There is a change, too, in his style – once criticised as high-handed. "In the past yes, I was abrasive", he says. "But that was necessary in TV." In his new businesses, delegation is the preferred route.

But a lower profile of late points to preparation, not inaction. "He is a chip off the old block", says one associate, referring to Mr Li Ka-shing, Richard's father, who has risen from manufacturing plastic flowers to dominate much of the territory's business. "Deal-making is in his genes", adds one local banker. And if the sectors in which he is now focused might appear staid after TV, they offer plenty of potential.

"The prospects in China are staggering", says Mr Li, referring to the insurance sector. The group's Top Glory insurance subsidiary has set up representative offices in Beijing and Shanghai as a step towards a licence.

More significant, the group has secured an alliance with China Insurance, through the sale of a 20 per cent stake in Top Glory's holding company to the mainland-backed insurer.

While Pacific Century's insurance ambitions in China are progressing, Top Glory has cemented its position in Hong Kong. "We are now the third largest in terms of premium sales", Mr Li says, citing incentives such as the sale of a 25 per cent stake in the insurance arm to management. "We are forcing them to upgrade the computer system. But they want a quicker break-even. I love that kind of fight".

In property and infrastructure, Pacific Century has invested across Asia, from India to Singapore and southern China. But in spite of his war-chest, and the fact that 90 per cent of the company remains in cash, Mr Li is wary.

"We bid for one of the subway projects, about US$2.5bn", he says. "We lost and I don't regret it".

Mr Li's approach is based on number-crunching rather than the gut feel employed by many of the territory's property tycoons. And he thinks some of the numbers do not add up.

"There are still people chasing after values which I think are not justified in terms of fundamentals. I have a strong aversion to the rat race."

Such a strategy means that most of Pacific Century's earnings still come from interest income. But that will change. "In five years the main source will be an operating business that either we have started or invested in", Mr Li says. "I am going to add one or two more legs."

Richard Li: 'The prospects in China are staggering'

The Pacific Century chief is guarded about where these new legs might be, but says he is actively searching with the help of Gordon Capital, the Toronto-based investment bank where he worked until returning to Hong Kong in 1990, and which he bought last year.

Television still holds some appeal, but Mr Li argues the market is now much more competitive than when Star pioneered regional satellite television. "We had it easy", he says.

Rather, he indicates the next move will be in line with his broader strategy of Pacific Century – limited diversification in terms of sectors, broad diversification in terms of regional markets.

Mr Li dismisses the idea that Pacific Century's geographical spread, and the choice of Singapore for its sole listing, reflect concerns about Hong Kong's prospects after its return to Chinese sovereignty in July next year. "I don't believe China is so dogmatic that it will kill the golden goose," he says.

His home territory, he argues, will remain a dynamic regional centre so long as it achieves a reasonable autonomy on day-to-day affairs and, crucially, its executive is selected on merit. Then, he believes, Hong Kong business is perfectly poised to capitalise on the mainland market.

As big a question, at least concerning his own strategy, is whether Richard will return to Hutchison Whampoa, the conglomerate controlled by his father. Family succession is an established trend in Hong Kong, as in much of Asia, with business dynasties looming large over the economy.

Given the size of Hutchison and its parent company, Cheung Kong, the aspirations of Richard and his elder brother Victor is the stuff of frequent speculation – although their father shows no sign of flagging.

Richard Li is not a fan of family succession. Personally, he says, he does not think it is a good idea. "But that doesn't mean it is doomed to failure. Look at the Wallenbergs", he says. Business relations within his own family are fine, says Richard, dismissing the idea of sibling rivalry with his brother, the deputy chairman of Cheung Kong, the flagship group of the elder Li.

The top job at Hutchison, says Richard, does not attract him – at least for the moment. "Maybe something will change later on", he muses.

But for now it is clear where his priorities lie. Although he is deputy chairman of Hutchison, it is his own business that takes his energies. "I spend 90 per cent of my time at Pacific Century ... I have an obligation to build it up." The deals on the drawing board will prove whether he can.

John Ridding

HK Telecom advances 12% in first six months

By John Ridding in Hong Kong

Hongkong Telecom yesterday announced a 12 per cent rise in net profits to HK$5.39bn (US$697m) for the six months to the end of September and called for greater freedom in setting rates and prices.

Mr Linus Cheung, chief executive, described the double-digit increase in the first half as "no mean feat" given the increased competition in Hong Kong's liberalised domestic market and the assault on its international direct-dial monopoly by call-back services.

New rivals, including the telecoms arms of Hutchison and New World, have undercut Hongkong Telecom's prices and eroded its market share. Mr Cheung said the company, one of the territory's largest companies and a subsidiary of Cable & Wireless of the UK, had lost 15 per cent of its international market share in the first half, compared with the same period in 1995.

Regulatory issues are important to the company's prospects at present, since its lucrative international direct-dial monopoly is currently under review. Mr Cheung said yesterday, however, that the company was under no pressure to reach an agreement on an early termination of the franchise, which is due to last until 2006.

The Hong Kong Telecom chief said that while dialogue on the issue would be intensifying, there would only be an accord if it was beneficial to shareholders.

Increased competition underpinned the group's strategy of reducing dependence on international direct-dial services, Mr Cheung said. "Three years ago IDD formed some 63 per cent of overall revenues. It now represents about 55 per cent." He said value-added fax and voicemail products, as well as Internet-related products, were responsible for a 37 per cent rise in revenue from other telephone activities.

Total revenues during the period climbed 9.3 per cent to HK$15.92bn. The increase included a rise of 4.8 per cent in international services, which in turn reflected traffic growth of 11 per cent. Growth in traffic to China increased just 5 per cent.

Overall operating margins increased one percentage point to 38 per cent, while Mr Cheung cited steady progress in the company's three-year plan to reduce the headcount by 2,500.

The interim dividend is increased from 30.9 cents to 34.6 cents. Earnings per share rose from 43.2 cents to 47.3 cents.

Government price cutting hits Shionogi

By Gwen Robinson

Shionogi, one of the leading Japanese manufacturers of pharmaceuticals, reported a decline in interim earnings due partly to government moves to cut prices of drugs available under the national health insurance (NHI) scheme, and partly to declines in over-the-counter retail prices for the company's products.

In response to the bleak outlook for the pharmaceuticals industry in Japan, Mr Yoshihiko Shiono, the company's president, yesterday announced a restructuring plan that will involve cutting approximately 1,700 staff, from the current total of around 6,700, by 2000.

To help reduce personnel, Shionogi will promote its early retirement programme and suspend the annual recruitment of university graduates for 1997 and 1998, Mr Shiono said.

Shionogi's research and development operations will also be reorganised, said the president. Part of the R&D unit which is currently centred at the company's headquarters in Osaka will be transferred to a new subsidiary, to be established in Boston in the US in January 1997.

Shionogi's unconsolidated recurring profit for the first half to September dropped 6.7 per cent from a year earlier to Y10.28bn ($90m).

Mr Shiono said that while sales rose 2.7 per cent to Y113.3bn, the rising cost-to-sales ratio had affected earnings.

The company has also increased its R&D outlays, with the stress on basic research in cancer and biochemical fields.

Net profit fell 13.3 per cent to Y4.8bn, or Y13.93 a share, but the company will pay an interim dividend of Y3.75 a share and leave the full-year payout unchanged at Y7.5.

For the full year to next March, Shionogi expects a fall in both recurring profit and sales for the second consecutive year.

Full-year sales of mainstay antibiotics are expected to rise only marginally and will be further affected by another bout of drug price reductions under the government-sponsored NHI scheme.

The expected overall sales decline includes a fall of Y2.6bn on the planned transfer of marketing of the diabetic treatment Humulin to its business partner, Eli Lilly, of the US.

The cost-to-sales ratio is also likely to rise to 49.1 per cent for the full year, up from last year's 48 per cent.

Full-year recurring profit is estimated at Y20bn, down 9.7 per cent from the previous year, on sales of Y225bn, down 0.2 per cent. Net profit is expected to fall 11 per cent to Y10bn.

The poor first-half performance failed to drag down Shionogi in trading on the Tokyo stock market, where the shares added Y11 to close at Y888 yesterday.

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Rise in UniChem's shares lifts value of its bid

Gehe bids £651m for Lloyds

By Christopher Price

The battle for Lloyds Chemists intensified yesterday as Gehe of Germany returned to the fray, bidding £650.6m ($1.06bn) in cash for the pharmacy chain.

The terms were similar to the German group's earlier bid, which, like a rival one from the UK's UniChem, was referred to the competition authorities in March. Both companies were given approval by the government to proceed with their bids just over two weeks ago.

The value of the new 500p-a-share offer failed to top that of UniChem. After a rise in its share price, UniChem's offer was last night worth 500.6p a share, or £651.3m.

The small gap between the rival offers raised speculation that both suitors will offer more, a prospect neither would rule out.

Gehe had been expected to deliver a higher "knockout" offer for Lloyds. Disappointment in the market left Lloyds' shares off 4.5p at 511p. UniChem shares rose 3.5p to 255p.

Mr Dieter Kämmerer, chairman of Gehe, said it had made a "very fair" offer. Referring to Lloyds' recent fall in profits, he said: "People who have talked of a higher offer have closed their minds to the events of the last seven months."

He added: "We believe that this comes down to a question of whether Lloyds shareholders want cash or UniChem paper. Their offer is heavily dependent on what they make of the merged business, but given the disappointing performance of the UniChem share price in the last two years, Lloyds shareholders cannot be too confident of the prospects."

Mr Kämmerer's comments were dismissed by Mr Jeff Harris, UniChem chief executive. "Investors have shown what they think by raising our offer price above Gehe's. There is an appetite for equities and investors are excited by what they believe we can do with Lloyds."

While he did not wish to get involved in an auction, UniChem had sufficient financing in place to increase the cash portion of its bid.

Lloyds, which has been keen to get a resolution to the bid battle, yesterday advised its shareholders to "defer taking any action".

See Lex

BP advances 9% in quarter

By Robert Corzine

British Petroleum yesterday reported third-quarter earnings in line with market expectations, as the company benefited from recent oil price rises, higher production and cost-cutting.

Net profits for the quarter were up 9 per cent to £650m on a replacement cost basis and before exceptional items. Net profits for the first nine months of the year were a record £1.93bn, an 18 per cent rise from last year.

Mr John Browne, chief executive, said much of the rise was the result of "self-help" which BP defines as higher volumes and cost-cutting. Higher oil prices and volumes caused year-on-year earnings in the upstream oil and gas division to surge by 33 per cent to £761m. But executives said much of that gain was eroded by tighter refining and chemical margins.

Profits from refining and marketing fell to £151m, against £209m the previous quarter and £211m at this stage last year. The fall was in spite of a recovery in margins in the UK, where pressures from a retail petrol price war eased somewhat in the quarter.

Operating profits at the chemical division were up £16m from the second quarter to £130m, as volume increases were offset by higher feedstock prices.

Capital expenditure in the first nine months was up 21 per cent against last year, and should reach £5bn for the year as a whole. But debt levels continued to decline. Net debt at the end of September was $6.5bn, well down on the $7bn-$8bn range which the company is targetting. Gearing fell to 24 per cent.

US demand for LPG, page 26

Cost concerns behind cut in M&S forecasts

By Peggy Hollinger

Shares in Marks and Spencer fell 5 per cent yesterday and brokers cut full-year forecasts as the high street retailer announced plans to create 2,000 jobs in the UK and abroad and interim results at the lower end of expectations.

Sir Richard Greenbury, chairman, warned that extra investment to bring the total workforce to 57,000 would "inevitably increase our cost base". He said it was necessary to satisfy M&S's growing number of customers around the world. He refused to quantify the costs but said they were expected to rise in line with sales.

The announcement came as the group turned in an 11.6 per cent increase in interim profits. Pre-tax profits of £430.1m ($701.1m) against last year's £385.4m, compared with a forecast range of £420m-£465m. Sales from continuing operations rose 9 per cent to £3.53bn. The shares, reflecting the market's initial disappointment over the profits, fell 26p to 483p.

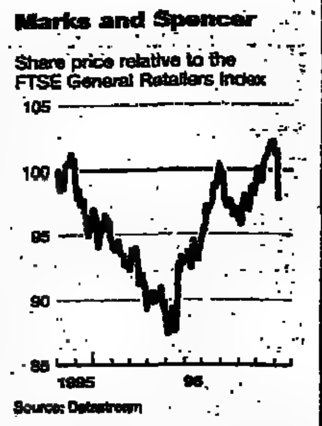
A 9 per cent rise in the cost base, which held back operating margins in the first half to a flat 12 per cent, surprised analysts. As a result, full-year forecasts were pulled back from about £1.16bn to about £1.11bn.

However, most said investment in service at a time of strong sales growth was a logical move and could win the company valuable long-term market share. Furthermore, the extra costs could be cut in hard times. "It is a way of flattening out the peaks and troughs of the economic cycle," said one analyst.

In spite of the market's disappointment, Sir Richard said the group remained "on track for doing what we want this year". With consumer confidence returning to the high street, M&S was upbeat about prospects for the rest of the year. He rejected suggestions that M&S had reached saturation point in the UK, pointing out that only four stores currently carried the group's entire product range.

LEX COMMENT

M&S



If Marks and Spencer is the tortoise Sir Richard Greenbury, its chairman, believes, the market is the hare. M&S's share price fell by 26p, or 5 per cent, to 483p yesterday. But this says more about the market's excitable spirits than it does about the company's performance. Perhaps M&S's trading statements earlier this year fostered undue optimism; certainly there was little in yesterday's half-year figures to justify much anxiety. The market chose to focus on the 2,000 extra jobs being created this year, which contributed to higher than expected costs. But to punish the company for this is perverse. Not only is the investment the result of attracting more customers to its stores but it is aimed at bolstering service, one of the core values which underpins the group's success. Furthermore, the figures show that the M&S formula of product innovation, quality and service continues to fuel growth both in the UK and in newer markets like Europe and Asia.

If there is a criticism, it is that the cautious pace of the tortoise can be painful. Did M&S have to wait 21 years after entering France to open its first store in Germany? The rejoinder, of course, is that the tortoise gets there in the end. With profit forecasts for the year trimmed back to around £1.1bn, the share is on a forward price/earnings ratio of 18. The growth prospects of the company would appear to justify this slight premium to the sector.

Whitbread

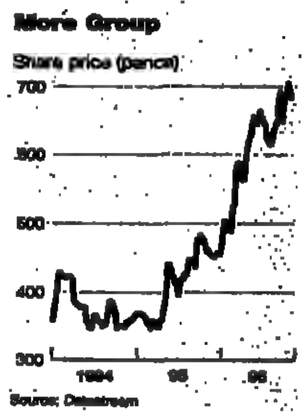
Whitbread's evolution from traditional brewer to retail leisure group has left it basking in the glow of the UK's consumer spending recovery. Profits are growing at an impressive pace across its spread of businesses, helped by a £400m a year capital expenditure programme. It is little wonder the management sounds ebullient.

Nonetheless, the pace of investment has made earnings growth easy in a low interest rate environment. The problem is delivering a decent return in the longer run. David Lloyd Leisure, acquired for £200m last year, will scarcely cover its interest charges this year. A pipeline of new clubs could help achieve a 15 per cent pre-tax return in four years time; but a fall in consumer spending would bring those returns down again. Whitbread's historic return on investment does not encourage confidence and the fashion for investment in pubs in the UK suggests that such projects could soon become less profitable.

The momentum within Whitbread's businesses should continue to drive profits faster than the stock market over the next two years, diluting such concerns. Whitbread's balance sheet can comfortably support its spending programme. In p/e terms, the shares are at only a small premium to the market. But while investors may make some hay during this blast of consumer sunshine, the harvest from Whitbread's recent acquisitions could prove less bountiful.

More acquires Swedish rival

By Michael Lindemann in London and Hugh Carnegy in Stockholm



More Group, the UK's largest outdoor advertiser, yesterday announced the acquisition of its biggest competitor in Scandinavia for £78.1m ($127m).

The deal will be partly financed by a 1-for-4 rights issue, at 600p a share, to raise £48.6m. The shares fell 13½p to 684p yesterday.

More plans to buy Wennergren-Williams, the Swedish group which is the biggest outdoor advertiser in its home market and has recently expanded aggressively in Denmark.

Mr Roger Parry, More's chief executive, stressed the importance of access to the Swedish market. Wennergren-Williams' dominance of that market was almost guaranteed, he said, because of strict planning restrictions on new advertising sites. "We are making this acquisition not because of the earnings kick but because of the long-term strategic prospects."

With the deal partly funded by debt, Mr Parry said gearing would rise from 20 per cent to a pro forma 200 per cent, with net borrowings of £40m. Strong cashflow should cut this.

Henry Schroder, the investment bank, said it had included a tender element in the sub-underwriting arrangements for the issue. This was only the second time it had done so following its premiere last week with a £222m rights issue for Stakis. The tender element reduces fees and Mr Robert Swannell, head of UK corporate finance at Schroder, said it was likely to be used increasingly frequently. He warned, however, that entire issues were unlikely to go out to tender for fear of scaring off pension funds and other institutions.

MAM's defined pensions grow

By William Lewis

Mercury Asset Management, the UK's largest fund manager, disclosed yesterday that over the last six months it had won more than 40 mandates to manage defined contributions pension schemes in the UK.

Defined contribution schemes, through which members are able to build up their own individual funds, are one of the fastest-growing areas of new business for institutional fund managers which have traditionally invested funds from defined benefit schemes.

Announcing a 29 per cent rise in pre-tax profits to £81.8m ($133m) for the six months to September, Mr Hugh Stevenson, chairman, said: "This business [defined contribution schemes] will be an important source of revenue and we are encouraged by the position which we have achieved in this rapidly growing market".

Turnover rose 26 per cent to £162.5m mainly because of a higher level of funds under management, which rose 21 per cent to £85.9bn, and the early payment of performance fees by clients.

Stripping out the rise in equity markets, net new business increased by £2bn.

Expenditure on systems and infrastructure, a higher provision for staff bonus payments and the consolidation of an Australian subsidiary resulted in operating costs increasing by 27 per cent to £103.8m.

One analyst said MAM's strategy on possible acquisitions appeared to be unclear and that it needed to focus on strengthening its US investment business.

Upturn in brewing cheers Whitbread

By Roderick Oram, Consumer Industries Editor

Whitbread reaped the rewards of heavy investment in pubs, restaurants and hotels and an upswing in brewing profits yesterday, when it reported a 13 per cent rise in interim pre-tax profits to £178.1m ($290m).

It kicked off what should be a "real humdinging results season for brewers and pub owners," one analyst said. For many companies, beer volumes are up despite poorer summer weather than last year and some margins have firmed.

But the company tried to moderate analysts' enthusiasm for the second half. It would lack, for example, the year earlier's 53rd week of trading and competition remained fierce in the eating-out market.

In the six months to August, capital spending was more than £250m. Coupled with acquisitions, it drove net debt to £640m (£296m) for gearing of 27 per cent (12.5 per cent) and interest cover of 12 times.

Mr Peter Jarvis, chief executive, said Whitbread had made the three big strategic acquisitions it needed over the past year: Marriott in hotels, David Lloyd in sports centres, and Pelican in city centre restaurants. Now Whitbread would grow by building those brands, brands developed in house and smaller opportunistic acquisitions.

Thus, the group was less likely to write off goodwill which it has had to pay on some acquired brands, he added. Including tax and goodwill written off, Whitbread's return on capital was 8.2 per cent against a cost of capital of 10.5-11 per cent, one analyst calculated. With the recent Pelican purchase hitting the current half, the return on capital will fall to 7.5 per cent.

Pre-tax profits from restaurants, hotels and leisure rose 58 per cent to £56.2m on sales up 18 per cent. Pizza Hut and TGI Friday's profits were up 20 per cent.

Whitbread Inns, the managed houses, lifted profits 15 per cent to £77.4m on sales up 14 per cent. Food sales were up 23 per cent, amusement machine revenue was up 12 per cent and drinks 9 per cent.

Whitbread Pub Partnerships, its tenanted houses, reported a 1 per cent rise in profits to £30.7m and a 3 per cent decline in sales, having on average 161 fewer pubs in the latest period. Profit per pub was up 7 per cent.

Brewing profits rose 12.4 per cent to £30.8m on sales up 8 per cent. In a market down 1 per cent, Whitbread's volume from existing brands grew 3 per cent but by 8 per cent including the Labatt UK acquisition. Take-home volumes were up 10 per cent, while Stella Artois was ahead 19 per cent and Heineken Export 29 per cent.

Trevor Humphries

Peter Jarvis: has made three strategic acquisitions

N Electric accuses CalEnergy

By Jane Martinson

Northern Electric accused CalEnergy, its Nebraska-based predator, of making "misleading" statements in its official offer document yesterday.

CalEnergy, the independent power producer, argued that its £759m ($1.24bn) cash offer of 630p per share and 103p per preference share was "full and fair".

It claimed that the £11 a share bid made by Trafalgar House almost two years ago would now value Northern at 633p a share.

Mr David Morris, Northern chairman, said the calculations behind this statement were "misleading" as they used the gross amounts paid out by the regional electricity company since the abortive bid. Northern has distributed about £540m in special dividends, a share consolidation, and from the National Grid demerger.

Northern's advisers produced their own calculations which estimated Trafalgar's bid to be worth 732p a share once these pay-outs were stripped out. They warned shareholders not to accept the offer and reminded them of the special dividend of 56.5p next February.

CalEnergy disagreed with the post-tax basis of Northern's figures and said it left out the effects of a windfall tax. Its offer was reduced by some £7m yesterday, adjusting for the number of shares in issue.

It reiterated its belief that the offer was fair, pointing at Northern's 494p share price before bid speculation buoyed it.

CalEnergy emphasised the strategic value of the bid. This prompted Mr Morris at Northern to say that "CalEnergy itself recognises the strategic and commercial advantages which Northern would bring to it. But it is trying to buy these benefits on the cheap."

Northern has two weeks to respond to the offer. It is to bring forward the announcement of its interim results.

RESULTS

		Turnover (£m)		Pre-tax profit (£m)		EPS (p)		Dividends: Current payment (p)	Date of payment	Corresponding dividend	Total for year	Total last year
Anglian Water	6 mths to Sept 30	413.3	(372.2)	132.7	(125.8)	46.7‡	(41.2)	10.2	Feb 17	8.9	-	30
Bellway	Yr to July 31	305.6	(267.1)	32.2	(34)	20†	(21.4)	5.65	Jan 20	5.25	8.2	7.7
British Airways	6 mths to Sept 30	4,394	(4,029)	470	(430)	39.7†	(33.8)	4.25	Jan 31	3.85	-	13.65
British Petroleum	9 mths to Sept 30	31,688	(26,897)	2,930♠	(1,982♠)	37	(23.2)	5‡‡	Feb 3	4	-	15.25
Cooper (Frederick)	Yr to July 31	94.7	(87.9)	12.1♠	(3.98♠)	41.5L	(3)	1.95	Feb 3	1.9	2.8	2.7
Creston Land	Yr to June 30	8.06	(7.58)	1.5♥	(6.84L♠)	2	(8.2L)	nil	-	nil	nil	nil
Dairy Crest ⁑	6 mths to Sept 30	381.6	(385)	16.5♠	(15.4)	9.9♠	(9.3)	3.26	Jan 23	-	-	-
Hartlepool Water	6 mths to Sept 30	3.06	(2.88)	0.98	(0.94)	8.8	(9.7)	2.8	Jan 1	2.5	-	7.1
Marks and Spencer	6 mths to Sept 28	3,532	(3,248)	430.1	(385.4)	10.4	(9.3)	3.3	Jan 17	3	-	11.4
MAM	6 mths to Sept 30	162.5	(128.5)	81.8	(63.6)	30.9	(24.2)	10	Jan 3	8	-	35#
Powerscreen Intl	6 mths to Sept 30	151.6	(121.1)	20.4	(17.1)	17.3	(14.5)	2.8	Feb 13	2.5	-	9.2
Stratagem	Yr to Aug 31	131.1	(90.7)	3.03L♥	(4.05♥)	8.4L	(19.8)	2	Jan 2	4	4	6
Whitbread	6 mths to Aug 31	1,505	(1,327)	178.1	(158.1)	27.23	(24.16)	6.25	Jan 20	5.75	-	21.85

Investment Trusts		NAV (p)		Attributable Earnings (£m)		EPS (p)		Current payment (p)	Date of payment	Corresponding dividend	Total for year	Total last year
Gartmore European	Yr to Sept 30	206.9	(178.5)	0.36	(0.281)	2.16	(1.65)	1.5	Dec 20	1.2	1.5	1.2
German	6 mths to Sept 30	126.9	(-)	0.292	(0.272L)	0.7	(0.7L)	-	-	-	-	0.8
Lowland	Yr to Sept 30	338.99	(325.63)	3.06	(2.65)	12.88	(11.27)	7	Dec 23	6.5	11	10
Montanaro UK	6 mths to Sept 30☆	135.5	(108.8)	0.48	(0.318)	0.97†	(1.27)	-	-	-	-	1.5
Schroder Income	Yr to Aug 31 ★	119.08	(106.85)	4.17	(2.09)	5.27	(2.84)	1.35	♦	-	4.35	2.25
Scottish National	Yr to Sept 30	84.9	(76.7)	13.7	(12.5)	8.89	(7.81)	2.8	Jan 7	2.7	8.6	7.7

Earnings shown basic. Dividends shown net. Figures in brackets are for corresponding period. ♠After exceptional charge. ♥After exceptional credit. ‡‡Third interim: makes 14.25p (11p) to date. ‡On reduced capital. †On increased capital. ⁑Pro forma throughout. #Excludes 40p special. ΦAim stock. §USM stock. ☆Comparatives for nine months. ♦Already paid. ★Comparatives for eight months.

Fayed acquires Alpha stake

By David Blackwell

Granada, the leisure group, yesterday sold its 25 per cent stake in Alpha Airports, the airline services group, for £52.4m cash. It was bought by a private company owned by Mr Mohamed Fayed, chairman of Harrods.

A spokesman for Mr Fayed described the deal as a personal investment that had no connection with Harrods. Mr Fayed believed that international travel had great growth prospects.

His investment has been made through Cylena Establishments, which has pledged not to make an offer for the remaining shares for at least six months.

Forte, the hotels group, retained a 25 per cent stake in Alpha when it was spun off at 140p a share at the beginning of 1994. Granada inherited the stake when it took over Forte at the beginning of this year.

Alpha has been dogged by disappointing results in its in-flight catering business, and the shares have struggled to stay above 100p this year. Mr Fayed has paid 125p a share, a significant premium to the market, which marked the shares up 1p yesterday to 105½p.

The deal follows last month's purchase of DFS, one of the world's biggest duty free shopping chains, by LVMH, the French luxury goods group, and Swissair's purchase earlier this year of Allders' duty free business.

Leaving aside the in-flight catering, there is some logic in Mr Fayed's interest in the airport retail division and the recently acquired US ground handling division – Harrods has 48 airport outlets and has for the past year owned Metro Aviation, a leading ground handling business for corporate jets in Europe.

Granada will use the proceeds to reduce debt of more than £3bn.

Prices for electricity determined for the purposes of the electricity pooling and settlement arrangements in England and Wales.

1/2 hour period ending	Provisional Price for Trading on [illegible]: Pool purchase price £/MWh	Final Prices for Trading on [illegible]: Pool purchase price £/MWh	Pool selling price £/MWh
0030	13.00	9.09	9.09
0100	13.00	9.09	9.09
0130	13.00	9.09	9.09
0200	13.00	9.10	9.10
0230	13.00	9.10	9.10
0300	13.00	9.09	9.09
0330	13.00	9.09	9.09
0400	11.88	9.09	9.09
0430	11.88	9.09	9.09
0500	11.88	9.09	9.09
0530	11.88	11.88	11.63
0600	11.67	11.62	11.62
0630	12.58	14.74	14.74
0700	16.89	14.82	14.82
0730	17.57	20.85	23.85
0800	17.57	30.00	33.75
0830	17.67	51.21	55.27
0900	17.77	52.72	57.10
0930	17.77	52.09	58.38
1000	17.77	51.91	56.28
1030	17.77	51.42	55.70
1100	17.88	32.25	38.49
1130	17.77	33.22	37.84
1200	30.47	33.84	38.06
1230	30.47	32.63	38.83
1300	17.77	30.73	34.54
1330	17.77	28.93	32.39
1400	17.77	17.43	17.43
1430	17.77	16.97	16.97
1500	17.77	16.73	16.73
1530	17.77	16.90	16.90
1600	17.85	18.62	18.52
1630	24.84	33.55	37.98
1700	45.41	62.84	67.92
1730	75.26	63.80	68.88
1800	72.44	62.67	68.01
1830	39.59	58.87	65.90
1900	33.19	104.85	116.60
1930	19.99	106.86	118.09
2000	19.87	80.56	88.99
2030	18.72	28.01	32.53
2100	17.77	21.80	24.94
2130	17.57	20.35	23.12
2200	17.57	19.75	22.34
2230	17.57	19.88	22.22
2300	16.97	19.65	22.21
2330	16.97	19.65	22.21
2400	11.67	14.76	14.76

Prices are determined for every half-hour in each twenty-four hour period. Prices are in pounds per megawatt-hour, rounded to two decimal places. To convert prices to pence per kilowatt-hour the decimal point should be moved one place to the left, eg £16.00/MWh becomes 1.600p/kWh. Provision for the determination of pool prices is made in the Pooling and Settlement Agreements which govern the operation of the electricity pool in England and Wales. The Pool Purchase Price is the basis of the majority of payments made to generators in respect of electricity traded through the pool. The calculation of pool prices is a highly complex process the product of which is subject to revision or correction (and sometimes major alterations) until final pool prices are determined approximately twenty-four days after the day of trading. Accordingly, due to the possibility of their revision and/or correction, no reliance should be placed upon provisional pool prices for any day being the same as final pool prices for that day. Final pool prices are also capable of revision. Pool Selling Price is the price paid by purchasers of electricity under the pool trading arrangements. It is dependent upon the determination of Pool Purchase Price. Further information on pool prices is provided on behalf of the Pool by Energy Settlements and Information Services Limited. Anyone wishing to receive such information should telephone 0115 945 6789 between 8:30am and 5:15pm Monday to Friday.
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INTERNATIONAL CAPITAL MARKETS

Sparkling performance by Spain and Italy

GOVERNMENT BONDS

By Richard Lapper and Ramraj Gogna in London and Lisa Bransten in New York

A sparkling performance by Italian and Spanish bonds was the highlight of a generally strong day on international bond markets, with the Italian 10-year yield spread over Germany breaking through the 200 basis point mark.

Reports that Mr Boris Yeltsin's heart operation had been successful helped underpin the US and German markets, while investors in US Treasuries were also encouraged by optimism that yesterday's elections would leave the political landscape unchanged.

After last week's hiccup, European convergence trades were again the order of the day. The optimism of Mr Jacques Chirac, the French president, about Spain's chances of meeting the Maastricht criteria by next year, bolstered both the Spanish and Italian markets.

Investors are also expecting a report by the European Commission, due today, to take an optimistic view on the chances of both Italy and Spain meeting the Maastricht criteria next year.

"It does seem now that there will be a soft interpretation of their criteria," said Ms Sharda Persaud, European economist at San Paolo Bank. Many investors expect the German authorities to accept a more flexible interpretation of the Maastricht criteria in exchange for a strict post-Emu stability pact, she added.

On Liffe, the BTP contract quickly broke through a technical resistance level at 124.35, and closed nearly 2 points higher at 126.96.

In the cash market the 10-year yield spread over Germany tightened by 12 basis points, to 198. Mr Alex Cooper, manager at Tullett and Tokyo, said Liffe traders were now looking for the spread to fall to 175 basis points in the short term.

On Meff the December bono future gained 1.49, to settle at 108.75, while the 10-year yield spread over Germany fell by 10 basis points to 168.

Sweden was again an exception, with the yield spread over Germany widening by 7 basis points to 134 points.

The UK gilts market rose strongly amid brisk trading on the back of weaker than expected industrial production figures.

Liffe's December long gilt future closed at 109¾, a rise of more than one percentage point. In the cash market, the yield spread of 10-year gilts over bunds narrowed by 2 basis points to 182 points. Traders were eagerly awaiting today's publication of the Bank of England's inflation report.

Further evidence that the economic growth is slowing helped German bunds, reviving hopes that interest rates may still have further to fall.

Shorter-dated issues benefited, with yields on benchmark two-year paper falling by 11 basis points.

France moved in line with the German market with the German yield spread over France unchanged at 4 basis points.

Trading in US Treasuries got off to a positive start as the dollar pierced the Y114 level against the Japanese yen and climbed against the D-Mark.

Traders in New York said the strong overseas buying had led to optimism that healthy demand would be shown at the afternoon auction of $18.25bn in three-year notes.

The yield on the benchmark 30-year Treasury fell to 6.583 per cent, its lowest level since early March, as the price jumped 1/2 to 102 1/32 by midday. At the short end of the maturity spectrum the two-year note rose 1/32 to 100¼, yielding 5.722 per cent. The December 30-year bond future rose 1/2 to 113 1/32.

Investors also continued to bet that US voters would return a Republican majority to both houses of Congress and send President Bill Clinton back to the White House, continuing the government's efforts to reduce the budget deficit.

Mr Richard Gilhooly, international bonds strategist at Paribas Capital Markets in New York, said he thought the market was getting close to being overvalued.

"If you do get the expected outcome [from the elections], it has largely been priced into the market and it seems that the upside is limited," he said. He added that such overvaluation could spell trouble for the $10bn auctions of 10-year and 30-year bonds set for today and tomorrow.

Russian debt jumps on news of successful Yeltsin surgery

Reports that President Boris Yeltsin had successfully undergone heart surgery provided a strong boost to Russian debt, writes Samer Iskandar.

Vnesheconombank debt denominated in D-Marks showed the strongest performance, rising 3.625 to around 82.375, while benchmark dollar-denominated Vnesh debt rose 2 points to 78.5.

The five-day rally has propelled Russian bonds roughly 5 points higher than their lows of last week, and analysts yesterday remained bullish.

However, bonds issued by the ministry of finance, which have been plagued by legal issues, lagged behind the Vnesh debt, rising by about 1.5 to 2.5 points.

Polish telecoms operator to raise $115m

By Conner Middelmann

Netia South, the private Polish telecoms operator jointly owned by Sweden's Telia and Poland's RP Telekom, is set to become the latest central European borrower to benefit from international banks' hunger for high-yielding assets.

The company plans to establish a $115m project finance loan facility, with Chase Investment Bank and Bank Handlowy w Warszawie mandated as arrangers. The banks have agreed to underwrite the facility, which is expected to be syndicated to a select group of banks late this year.

Through Telekom Silesia, its majority owned subsidiary, Netia plans to build, own and operate a telecoms network consisting of 250,000 lines in Silesia, a highly industrialised and densely populated region in south-west Poland.

Earlier this year, Netia raised $180m through a 10-year project finance facility, which included a $75m A-loan from the European Bank for Reconstruction and Development, an $85m B-loan syndicated among banks and $15m from the Nordic Investment Bank.

The interest margin on that transaction was around 325 basis points over Libor, whereas the margin on the forthcoming deal is said to be closer to 250 points, reflecting a sharp decline in margins in the region.

But while borrowers from other countries in the region, including Hungary, the Czech Republic, Slovenia and Slovakia, have been active players in the syndicated loans market, Polish transactions have been few and far between, totalling only around $300m this year.

This is partly because liquidity in the domestic banking sector and fierce competition among Polish banks have made it cheaper for companies to borrow funds at home than abroad.

However, observers say this is likely to change. "The general fall in interest margins for eastern European borrowers means that Polish pricings in the international market will converge towards domestic rates," says one banker.

Moreover, as the financing demand in Poland grows, "the capacity of local banks to provide enough funding may become exhausted," he says.

But even if Polish borrowings in the international syndicated loans market increase, interest margins are not likely to fall as quickly as, say, in Hungary, because some banks are still wary of lending to Poland.

"There's always a big hangover of caution with any country that has rescheduled its debt," says Mr Lorenz Jorgensen, senior banker at the EBRD's syndications department.

Japanese banks, which have been instrumental in driving margins in other eastern European countries lower, are cautious of entering countries that have rescheduled their debt, as Japan's ministry of finance does not seem eager to encourage an atmosphere of forgiveness, bankers say.

By contrast, most German and Austrian banks do not need to make provisions against Polish assets, and many US banks have relatively loose provision requirements.

Small deals compete with World Bank for attention

INTERNATIONAL BONDS

By Samer Iskandar

Primary market activity all but ground to a halt yesterday, as a handful of small deals competed for the attention of investors with yet another lira-denominated zero-coupon issue by the World Bank.

Emerging market-hungry investors were offered a novel securitisation by Venezuela Synthetic Sovereign Investment. The deal is a repackaging of existing Republic of Venezuela bonds due 2007, originally denominated in US dollars.

The new securities are in Dutch guilders and pay a coupon of 9 per cent. ING Barings, the lead manager, said the deal – the first appearance by Venezuela in the guilder sector – was "a test case" inspired by the recent success of similar securitisations in D-Marks by Morocco and Venezuela.

Walt Disney Company reached out to the antipodes to raise NZ$100m – the first time it has tried to raise money in this currency. Hambros Bank, the lead manager, said the borrower "wanted to tap a retail currency where it has a strong name recognition", as it did earlier this year when it borrowed in Italian lire and Swiss francs.

The paper generated "strong interest" among investors in Switzerland, Germany and the Benelux region, Hambros said, adding that it expected the issue to attract good demand from Asia overnight.

The sterling sector saw a 10-year issue of subordinated bonds by Landesbank Schleswig Holstein. SBC Warburg, the lead manager, said existing subordinated debt with maturities in the 2003–2006 region had become very expensive on the secondary market, which favoured some switching into the new bonds.

It also pointed out that "UK investors appreciate the state guarantee provided to Landesbank debt", and value such securities better than bonds by traditional German banks.

Elsewhere, Mexico was reported to be considering a maiden issue in Italian lire, possibly of floating-rate notes, for a total amount of around L500bn.

Since its return to the international market in 1995, after a long absence in the wake of the peso crisis of December 1994, Mexico has tapped three sectors: the US dollar, the yen and the D-Mark. There is one outstanding Mexican issue in lire, a two-year floater by Pemex, the national oil company.

New international bond issues

Borrower	Amount m.	Coupon %	Price	Maturity	Fees %	Spread bp	Book-runner
SWISS FRANCS							
LW Rentenbank	100	3.75	102.40	Dec 2003	2.50	-	Del Gottardo/Von Ernst
STERLING							
LB Schleswig Holstein(s)	100	8.00	99.451R	Dec 2006	0.35R	+30(7¼%-06)	SBC Warburg
FRENCH FRANCS							
CCDQ	1bn	5.50	99.95R	Dec 2002	0.325R	+28(5¼%-02)	Banque Nationale de Paris
GUILDERS							
Venezuela Synthetic(a,l)	125	9.00	100.00	Dec 2001	1.50R	+410(6¾%-01)	ING Barings
ITALIAN LIRE							
World Bank(b)	500bn	zero	48.185	Dec 2006	1.875	-	BCI/JP Morgan
NEW ZEALAND DOLLARS							
Walt Disney Co	100	7.25	101.275	Nov 1999	1.60	-	Hambros Bank

Final terms, non-callable unless stated. Yield spread (over relevant government bond) at launch supplied by lead manager. R: fixed re-offer price; fees shown at re-offer level. a) Underlying: Republic of Venezuela DOB due Dec 2007. b) Callable on 6/12/01 at 68.05%. l) Long 1st coupon. s) Short 1st coupon.

WORLD BOND PRICES

BENCHMARK GOVERNMENT BONDS

		Coupon	Red Date	Price	Day's change	Yield	Week ago	Month ago
Australia		8.750	11/06	98.3140	+0.620	7.27	7.43	7.74
Austria		6.875	07/06	98.7900	+0.390	6.04	6.09	6.04
Belgium		7.000	05/06	106.6100	+0.660	6.06	6.15	6.23
Canada *		7.000	12/06	105.9000	+1.050	6.21	6.58	7.14
Denmark		8.000	03/06	107.6000	+0.400	6.87	6.87	7.00
France	BTAN	5.500	10/01	102.8311	+0.540	4.86	4.96	5.30
	OAT	6.500	10/06	104.4400	+0.690	5.90	5.99	6.10
Germany Bund		6.250	04/06	102.2300	+0.690	5.93	6.01	6.08
Ireland		8.000	08/06	107.4200	+0.870	6.93	6.91	7.06
Italy		9.500	02/06	110.8900	+1.550	7.86†	8.20	8.57
Japan	No 140	6.600	06/01	123.0877	+0.680	1.37	1.55	1.74
	No 182	3.000	09/05	104.1522	+0.610	2.44	2.66	2.85
Netherlands		8.500	06/06	119.0300	+0.710	5.85	5.94	5.95
Portugal		9.500	02/06	113.5700	+0.950	7.43	7.55	7.94
Spain		8.800	04/06	107.5900	+1.280	7.62	7.83	7.98
Sweden		6.000	02/05	92.1000	+0.170	7.29	7.23	7.47
UK Gilts		8.000	12/00	103-01	+11/32	7.13	6.94	6.94
		7.500	12/06	99-04	+24/32	7.62	7.66	7.65
		9.000	10/08	109-24	+27/32	7.74	7.88	7.80
US Treasury *		6.500	10/06	101-22	+20/32	6.27	6.43	6.62
		6.750	08/26	102-05	+36/32	6.58	6.72	6.88
ECU (French Govt)		7.000	04/06	104.8300	+0.750	6.30	6.33	6.38

London closing, *New York mid-day. Yields: Local market standard.
† Gross (including withholding tax at 12.5 per cent payable by nonresidents)
Prices: US, UK in 32nds, others in decimal. Source: MMS International

US INTEREST RATES

Latest		Treasury Bills and Bond Yields			
		One month	-	Two year	5.74
Prime rate	8¼	Two month	-	Three year	5.86
Broker loan rate	7	Three month	5.16	Five year	6.05
Fed funds	5 5/16	Six month	5.29	10-year	6.30
Fed funds at intervention	-	One year	5.41	30-year	6.62

BOND FUTURES AND OPTIONS

France

NOTIONAL FRENCH BOND FUTURES (MATIF) FFr500,000

	Open	Sett price	Change	High	Low	Est. vol.	Open int.
Dec	126.40	126.96	+0.62	127.04	126.36	164,356	188,444
Mar	126.38	126.92	+0.62	126.98	126.36	10,517	37,524
Jun	125.14	125.68	+0.60	125.74	125.14	99	8,969

LONG TERM FRENCH BOND OPTIONS (MATIF)

Strike Price	Calls Nov	Calls Dec	Calls Mar	Puts Nov	Puts Dec	Puts Mar
124	-	-	-	0.03	0.12	0.41
125	2.00	-	-	0.07	0.24	0.62
126	1.15	1.36	1.79	0.21	0.48	0.93
127	0.51	0.80	1.32	0.66	0.86	-
128	0.15	0.37	0.80	-	-	-

Est. vol. total, Calls 21,863 Puts 9,445. Previous day's open int., Calls 169,099 Puts 164,826

Germany

NOTIONAL GERMAN BUND FUTURES (LIFFE)* DM250,000 100ths of 100%

	Open	Sett price	Change	High	Low	Est. vol	Open int.
Dec	99.55	100.12	+0.66	100.26	99.46	197958	249447
Mar	98.58	99.12	+0.67	99.13	98.58	1682	17852

BUND FUTURES OPTIONS (LIFFE) DM250,000 points of 100%

Strike Price	Calls Dec	Calls Jan	Calls Feb	Calls Mar	Puts Dec	Puts Jan	Puts Feb	Puts Mar
10000	0.51	0.34	0.58	0.71	0.39	1.22	1.44	1.58
10050	0.26	0.21	0.40	0.53	0.66	1.59	1.76	1.91
10100	0.14	0.13	0.27	0.39	1.02	2.01	2.15	2.27

Est. vol. total, Calls 19108 Puts 17658. Previous day's open int., Calls 192768 Puts 189193

Italy

NOTIONAL ITALIAN GOVT. BOND (BTP) FUTURES (LIFFE)* Lira 200m 100ths of 100%

	Open	Sett price	Change	High	Low	Est. vol	Open int.
Dec	123.70	125.60	+1.90	125.80	123.52	99890	57779
Mar	123.16	124.80	+1.88	125.00	123.16	421	3931

ITALIAN GOVT. BOND (BTP) FUTURES OPTIONS (LIFFE) Lira200m 100ths of 100%

Strike Price	Calls Dec	Calls Mar	Puts Dec	Puts Mar
12550	0.99	1.72	0.89	2.43
12600	0.73	1.50	1.13	2.70
12650	0.52	1.31	1.42	3.01

Est. vol. total, Calls 20502 Puts 3394. Previous day's open int., Calls 196908 Puts 174276

Spain

NOTIONAL SPANISH BOND FUTURES (MEFF)

	Open	Sett price	Change	High	Low	Est. vol.	Open int.
Dec	107.30	108.75	+1.49	109.05	107.16	123,380	76,735
Mar	-	108.14	-	-	-	400	719

UK

NOTIONAL UK GILT FUTURES (LIFFE)* £50,000 32nds of 100%

	Open	Sett price	Change	High	Low	Est. vol	Open int.
Dec	108-16	109-10	+0-28	109-15	108-14	106210	143799
Mar		108-16	+0-28			0	2237

LONG GILT FUTURES OPTIONS (LIFFE) £50,000 64ths of 100%

Strike Price	Calls Dec	Calls Jan	Calls Feb	Calls Mar	Puts Dec	Puts Jan	Puts Feb	Puts Mar
109	0-57	0-59	1-18	1-34	0-37	1-27	1-50	2-02
110	0-27	0-35	0-57	1-07	1-07	2-03	2-25	2-39
111	0-10	0-19	0-38	0-50	1-54	2-51	3-06	3-18

Est. vol. total, Calls 6500 Puts 659. Previous day's open int., Calls 47092 Puts 28805

Ecu

ECU BOND FUTURES (MATIF) ECU100,000

	Open	Sett price	Change	High	Low	Est. vol.	Open int.
Dec	93.78	94.26	+0.48	94.40	93.78	1,565	6,262
Mar	-	93.82	-	-	-	-	26

US

US TREASURY BOND FUTURES (CBT) $100,000 32nds of 100%

	Open	Latest	Change	High	Low	Est. vol.	Open int.
Dec	112-30	113-15	+0-16	113-22	112-30	150,039	394,148
Mar	112-16	113-01	+0-15	113-08	112-16	1,547	30,418
Jun	112-13	112-17	+0-16	112-21	112-13	1,017	6,589

Japan

NOTIONAL LONG TERM JAPANESE GOVT. BOND FUTURES (LIFFE) Y100m 100ths of 100%

	Open	Close	Change	High	Low	Est. vol	Open int.
Dec	126.40			126.40	126.24	2919	n/a
Mar	125.49			125.50	125.39	272	n/a

* LIFFE futures also traded on APT. All Open Interest figs. are for previous day.

FTSE Actuaries Govt. Securities — UK Indices

Price Indices UK Gilts	Tue Nov 5	Day's change %	Mon Nov 4	Accrued interest	xd adj. ytd
1 Up to 5 years (21)	121.56	0.22	121.28	2.69	8.04
2 5-15 years (19)	149.36	0.60	148.46	3.01	9.09
3 Over 15 years (8)	166.72	0.86	165.30	3.97	8.85
4 Irredeemables (6)	191.58	0.33	190.95	4.28	8.58
5 All stocks (54)	143.93	0.52	143.18	3.18	8.92

	Low coupon yield Nov 5	Nov 4	Yr. ago	Medium coupon yield Nov 5	Nov 4	Yr. ago	High coupon yield Nov 5	Nov 4	Yr. ago
5 yrs	7.21	7.31	7.38	7.26	7.37	7.29	7.31	7.42	7.48
15 yrs	7.85	7.93	8.00	7.83	7.92	8.05	7.85	7.93	8.11
20 yrs	7.94	8.00	8.06	7.89	7.96	8.09	7.92	7.99	8.15
Irred.†	8.00	8.03	8.13						

Index-linked	Tue Nov 5	Day's change %	Mon Nov 4	Accrued interest	xd adj. ytd
6 Up to 5 years (2)	202.49	0.12	202.24	0.66	5.26
7 Over 5 years (10)	193.69	0.34	193.04	1.61	4.17
8 All stocks (12)	193.57	0.31	192.97	1.40	4.21

	Inflation 5% Nov 5	Nov 4	Yr. ago	Inflation 10% Nov 5	Nov 4	Yr. ago
Up to 5 yrs	3.20	3.22	3.12	2.55	2.58	2.02
Over 5 yrs	3.61	3.63	3.63	3.41	3.44	3.44

Average gross redemption yields are shown above. Coupon Bands: Low: 0%-7¾%; Medium: 8%-10¾%; High: 11% and over. † Flat yield. ytd Year to date.

FT Fixed Interest Indices

	Nov 5	Nov 4	Nov 1	Oct 31	Oct 30	Yr ago	High*	Low*
Govt. Secs. (UK)	93.76	93.37	93.66	93.89	93.85	94.06	96.34	91.59
Fixed Interest	115.36	115.25	115.32	115.35	115.45	112.56	116.45	110.74

Gilt Edged Activity Indices

	Nov 4	Nov 1	Oct 31	Oct 30	Oct 29
Gilt Edged bargains	129.1	100.9	98.3	86.3	85.3
5-day average	100.0	98.8	98.0	95.5	96.0

* for 1996. Government Securities high since compilation: 127.4 (09/01/35), low 49.18 (03/01/75). Fixed Interest high since compilation: 133.87 (21/01/94), low 50.53 (03/01/75). Basis 100: Government Securities 15/10/26 and Fixed Interest 1928. SE activity indices rebased 1974.

UK GILTS PRICES

Notes	Yield Int	Yield Red	Price £	+ or –	52 week High	52 week Low
Shorts" (Lives up to Five Years)						
Conversion 10pc 1996	9.99	6.74	100⅛	-	103⅝	100⅛
Treas 13¼pc 1997‡‡	13.06	6.01	101 15/32	-	107¼	101½
Exch 10½pc 1997	10.38	6.10	101 3/16	-	107 3/16	100¼
Treas Cnv 7pc 1997‡‡	6.97	6.33	100⅛	-	101 13/16	100½
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

Notes	Yield Int	Yield Red	Price £	+ or –	52 week High	52 week Low
Treas 7½pc 2006‡‡	7.56	7.62	99 3/16	+¼	101 13/16	94 13/16
Treas 7¾pc 2006‡‡	7.70	7.65	100 11/16	+¼	103¼	96 3/16
Treas 8pc 2002-6‡‡	7.87	7.56	101 11/16	+¼	104 11/16	97⅝
Treas 11¾pc 2003-7	9.72	7.48	120⅞	+⅛	125 3/16	118 13/16
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

Index-Linked	Notes	Yield (1)	Yield (2)	Price £	+ or –	52 week High	52 week Low
4⅝pc '98‡‡	(135.6)	0.87	2.37	113 13/16	+⅛	114⅝	111⅛
2½pc '01	(78.3)	2.69	3.25	184 13/16	+⅛	185 13/16	176¼
2½pc '03	(78.8)	2.94	3.36	180 13/16	+⅛	181¼	171 13/16
4⅜pc '04‡‡	(135.6)	3.02	3.40	117⅞	+⅛	118 13/16	112 13/16
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

Other Fixed Interest: [illegible]

• 'Tap' stock. ‡‡ Tax-free to non-residents on application. E Auction basis. xd Ex dividend. Closing mid-prices are shown in pounds per £100 nominal of stock. Prospective real index-Linked redemption yields are calculated by HSBC Greenwell from Bank of England closing prices.

FT/ISMA INTERNATIONAL BOND SERVICE

Listed are the latest international bonds for which there is an adequate secondary market. Latest prices at 7:10 pm on November 5

	Issued	Bid	Offer	Chg	Yield
U.S. DOLLAR STRAIGHTS					
Abbey Natl Treasury 6½ 03	1000	100¼	100⅝	+⅛	6.44
ABN Amro Bank 7¼ 05	1000	102⅞	102⅞	+⅛	6.86
African Dev Bk 7⅝ 23	500	100⅞	101½	+½	7.29
Alberta Province 7⅜ 98	1000	103⅛	103⅛		5.92
Asian Dev Bank 6¼ 05	750	98⅛	98⅞	+⅛	6.62
Sweden 8 97	2500	104⅛	104⅝	-⅛	3.47
United Kingdom 7¼ 97	5500	103½	103⅞	-⅛	3.43
Volkswagen Intl Fin 7 03	1000	105⅝	106	-⅛	5.98
World Bank 5⅞ 03	3000	102	102¼	+½	5.62
World Bank 7⅛ 05	3000	107½	107⅞	+½	5.98
Abbey Natl Treasury 8 03 £	1000	100⅞	101⅛	+¼	7.81
British Land 8⅞ 23 £	150	94⅛	94⅝	+½	8.86
Denmark 6¼ 98 £	800	99⅜	99¼		6.65
Depfa Finance 7⅛ 03 £	500	96⅜	96⅝	+¼	7.81
EIB 8 03 £	1000	102⅛	102¼	+⅛	7.57
Glaxo Wellcome 8¾ 05 £	500	103⅜	103⅞	+½	8.17
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

FLOATING RATE NOTES: [illegible]

CONVERTIBLE BONDS: [illegible]

STRAIGHT BONDS: The yield is the yield to redemption of the bid-price; the amount issued is in millions of currency units. Chg. day=Change on day. FLOATING RATE NOTES: Denominated in dollars unless otherwise indicated. Coupon shown is minimum. Spread=Margin above six-month offered rate (three-month §above mean rate) for US dollars. C.cpn=The current coupon. CONVERTIBLE BONDS: Denominated in dollars unless otherwise indicated. Cnv. price=Nominal amount of bond per share expressed in currency of share at conversion rate fixed at issue. Prem=Percentage premium of the current effective price of acquiring shares via the bond over the most recent price of the shares.

CURRENCIES AND MONEY

Dollar gains in final trading before US election

MARKETS REPORT

By Simon Kuper

The dollar gained ahead of last night's US elections on the belief that the Republicans would keep control of Congress while President Clinton would win re-election. Currency strategists said this suggested a continued tight US fiscal policy and thus a stronger dollar. The dollar also benefited from yesterday's rise in US stocks and bonds.

The D-Mark suffered on a second successive day of weak German economic figures, with orders data coming in lower than expected. This suggested that the German recovery was weaker than expected, and a Bundesbank rate hike a more distant prospect than many currency analysts had assumed.

The German currency was later hit by reports that a large number of countries could qualify for the first round of European monetary union. This revived "convergence trades", in which traders sell the D-Mark and buy the lira and peseta on expectations that yield curves will converge.

The Swiss franc hit a fresh 20-month low against the D-Mark on news that Mr Boris Yeltsin, the Russian President, had had successful open heart surgery. The Swiss franc is considered a safe haven currency that rises during international turmoil.

Norway unexpectedly cut its deposit and overnight lending rates by 50 basis points, hoping to weaken the appreciating krone.

The dollar closed in London three tenths of a pfennigs stronger against the D-Mark at DM1.516 and Y0.2 firmer against the yen at Y114. The yen was unchanged against the D-Mark at Y75.20.

■ **Pound in New York**

Nov 5	—Latest—	— Prev. close —
£ spot	1.6465	1.6455
1 mth	1.6454	1.6444
3 mth	1.6432	1.6422
1 yr	1.6307	1.6297

■ According to newspaper reports yesterday, the European Commission will today say that as many as 13 of the 15 European Union member states are on track to meet the budget deficit criterion set out in the Maastricht treaty. The progress was thanks to strong European economic growth, the reports said. Only Italy and Greece would fail to meet the criterion. With the French President Jacques Chirac saying yesterday that Spain was sure to qualify for the first round of Emu, belief revived in the markets that the single European currency would have many members.

The peseta and lira rose marginally against the D-Mark. But one currency strategist said the rise would have been more pronounced but for lira selling by the Bank of Italy. The strategist said the central bank wants to stop the lira from appreciating too much before its expected entry into the European exchange rate mechanism later this month. Italy is seeking an entry rate above L1,000 to the D-Mark, while France wants a stronger lira.

■ The same strategist pointed out that Spanish bond yields were now lower than UK yields, which were almost on a par with Italian yields. He said the favourable yields helped sterling to withstand weaker than expected UK industrial production and manufacturing output figures yesterday. The pound rose another two fifths of a pfennig against the D-Mark to close at DM2.496, after hitting resistance at DM2.50.

■ Norges Bank, the Norwegian central bank, surprised the markets with a 50 basis point interest rate cut when most analysts had expected the bank to raise rates. The fall in the deposit rate to 4 per cent and the overnight lending rate to 6 per cent fractionally weakened the krone, which closed in London at Nkr4.203 to the D-Mark.

Mr Kjell Storvik, Norges Bank's governor, said the rate cut was meant "to reduce the krone's appreciation". The currency has risen on the back of high oil prices and strong economic growth, and the bank said it had been forced to sell the krone to weaken it.

Mr Jeremy Hawkins, chief economist at the Bank of America in London, pointed to the change in government in Norway a fortnight ago, when Mr Thorbjorn Jagland succeeded his fellow Labour party member Mrs Gro Harlem Brundtland as prime minister. "A cynical view would be that the new government applied pressure on the bank to trim rates," Mr Hawkins said.

■ **OTHER CURRENCIES**

Nov 5	£	$
Czech Kr	44.3227 - 44.3789	26.9250 - 26.9590
Hungary	255.976 - 256.196	155.580 - 155.630
Iran	4939.60 - 4955.90	3000.00 - 3010.00
Kuwait	0.4918 - 0.4923	0.2989 - 0.2994
Poland	4.6200 - 4.6250	2.8060 - 2.8095
Russia	8986.15 - 9009.28	5468.00 - 5471.00
U.A.E.	6.0399 - 6.0481	3.6710 - 3.6740

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POUND SPOT FORWARD AGAINST THE POUND

Nov 5		Closing mid-point	Change on day	Bid/offer spread	Day's Mid high	Day's Mid low	One month Rate	One month %PA	Three months Rate	Three months %PA	One year Rate	One year %PA	Bank of Eng. Index
Europe													
Austria	(Sch)	17.5847	+0.0295	557 - 737	17.6190	17.4707	17.5212	3.0	17.4647	2.9	-	-	104.8
Belgium	(BFr)	51.4526	+0.1287	156 - 096	51.5810	51.1450	51.3376	2.9	51.0726	3.0	49.8776	3.1	105.9
Denmark	(DKr)	9.5898	+0.0162	855 - 941	9.6196	9.5595	9.5666	2.5	9.5293	2.5	9.3504	2.5	107.1
Finland	(FM)	7.5033	+0.0246	971 - 095	7.5220	7.4460	-	-	-	-	-	-	84.6
France	(FFr)	8.4355	+0.0061	322 - 388	8.4722	8.3968	8.4165	2.7	8.3776	2.7	8.1691	2.8	108.7
Germany	(DM)	2.4962	+0.0042	951 - 973	2.5046	2.4820	2.4901	3.0	2.4773	3.0	2.4209	3.0	107.9
Greece	(Dr)	392.676	-0.217	466 - 886	394.504	391.115	-	-	-	-	-	-	67.5
Ireland	(I£)	1.0002	+0.0015	995 - 007	1.0018	0.9975	0.9996	0.4	0.9989	0.5	0.9923	0.8	100.8
Italy	(L)	2504.31	+1.43	250 - 611	2515.06	2495.17	2508.11	-1.8	2515.61	-1.8	2520.11	-0.6	77.0
Luxembourg	(LFr)	51.4526	+0.1287	156 - 096	51.5810	51.1450	51.3376	2.9	51.0726	3.0	49.8776	3.1	105.9
Netherlands	(Fl)	2.7996	+0.0062	983 - 012	2.8078	2.7833	2.7926	3.1	2.7778	3.2	2.7129	3.1	106.0
Norway	(NKr)	10.4896	+0.0302	836 - 957	10.5809	10.4263	10.4773	1.4	10.4573	1.2	10.3525	1.3	99.7
Portugal	(Es)	252.582	+0.236	471 - 692	253.664	251.731	252.777	-0.9	253.147	-0.9	-	-	95.6
Spain	(Pta)	210.088	+0.149	006 - 170	210.809	209.188	210.253	-0.9	210.498	-0.8	210.498	-0.2	80.1
Sweden	(SKr)	10.8953	+0.0235	861 - 044	10.9518	10.8412	10.8841	0.1	10.8915	0.1	10.8791	0.1	88.8
Switzerland	(SFr)	2.0996	+0.0002	985 - 007	2.1059	2.0788	2.0919	4.3	2.0788	4.3	2.0101	4.3	108.0
UK	(£)	-	-	-	-	-	-	-	-	-	-	-	81.4
Ecu	-	1.3008	+0.002	000 - 016	1.3049	1.2946	1.299	1.8	1.2945	2.0	1.2791	2.1	-
SDR†	-	1.180630	-	-	-	-	-	-	-	-	-	-	-
Americas													
Argentina	(Peso)	1.6465	-0.0012	450 - 460	1.6557	1.6433	-	-	-	-	-	-	-
Brazil	(R$)	1.6912	-0.0012	905 - 918	1.7014	1.6830	-	-	-	-	-	-	-
Canada	(C$)	2.1955	-0.0044	945 - 965	2.2139	2.1941	2.1904	2.8	2.1796	2.9	2.1205	3.4	86.5
Mexico	(New Peso)	12.8776	-0.0793	689 - 862	13.0493	12.8644	-	-	-	-	-	-	-
USA	($)	1.6458	-0.0011	453 - 462	1.6585	1.6435	1.6447	0.8	1.6426	0.8	1.6305	0.9	97.1
Pacific/Middle East/Africa													
Australia	(A$)	2.0905	-0.002	893 - 917	2.1099	2.0869	2.0916	-0.7	2.0925	-0.4	2.0921	-0.1	93.4
Hong Kong	(HK$)	12.7258	-0.0086	215 - 301	12.8035	12.7069	12.7185	0.7	12.7046	0.7	12.64	0.7	-
India	(Rs)	58.7369	-0.0163	365 - 382	59.1520	58.6270	-	-	-	-	-	-	-
Israel	(Shk)	5.8457	-0.001	389 - 525	5.8749	5.8359	-	-	-	-	-	-	-
Japan	(Y)	187.698	+0.297	584 - 831	188.610	186.690	186.808	5.7	184.948	5.9	176.918	5.7	127.4
Malaysia	(M$)	4.1545	-0.0044	527 - 562	4.1764	4.1515	-	-	-	-	-	-	-
New Zealand	(NZ$)	2.3158	-0.0061	141 - 170	2.3314	2.3140	2.3228	-3.6	2.3317	-2.8	2.3525	-1.6	112.6
Philippines	(Peso)	43.2092	-0.0714	398 - 786	43.4200	43.1380	-	-	-	-	-	-	-
Saudi Arabia	(SR)	6.1724	-0.0043	704 - 744	6.2105	6.1648	-	-	-	-	-	-	-
Singapore	(S$)	2.3173	-0.0003	161 - 185	2.3307	2.3132	-	-	-	-	-	-	-
South Africa	(R)	7.7408	-0.0005	346 - 470	7.7832	7.7294	-	-	-	-	-	-	-
South Korea	(Won)	1360.62	+0.61	984 - 141	1369.02	1359.48	-	-	-	-	-	-	-
Taiwan	(T$)	45.2561	-0.0317	129 - 094	45.5367	45.2127	-	-	-	-	-	-	-
Thailand	(Bt)	41.9790	+0.0063	634 - 946	42.2310	41.9040	-	-	-	-	-	-	-

† Rates for Nov 4. Bid/offer spreads in the Pound Spot table show only the last three decimal places. Forward rates are not directly quoted to the market but are implied by current interest rates. Sterling index calculated by the Bank of England. Base average 1990 = 100. Index rebased 1/2/95. Bid, Offer and Mid-rates in both this and the Dollar Spot tables derived from THE WM/REUTERS CLOSING SPOT RATES. Some values are rounded by the F.T.

DOLLAR SPOT FORWARD AGAINST THE DOLLAR

Nov 5		Closing mid-point	Change on day	Bid/offer spread	Day's mid high	Day's mid low	One month Rate	One month %PA	Three months Rate	Three months %PA	One year Rate	One year %PA	J.P. Morgan index
Europe													
Austria	(Sch)	10.6725	+0.0254	702 - 753	10.6790	10.6141	10.6531	2.2	10.6128	2.2	10.4178	2.4	104.8
Belgium	(BFr)	31.2700	+0.1	500 - 900	31.2920	31.0740	31.21	2.3	31.0825	2.4	30.5425	2.3	105.7
Denmark	(DKr)	5.8270	+0.0139	260 - 280	5.8318	5.7980	5.8181	1.8	5.7997	1.9	5.718	1.9	108.5
Finland	(FM)	4.5592	+0.0162	567 - 617	4.5620	4.5250	4.5504	2.3	4.5316	2.4	4.4492	2.4	84.2
France	(FFr)	5.1256	+0.0072	250 - 262	5.1282	5.1028	5.1175	2.0	5.0993	2.1	5.0236	2.0	108.3
Germany	(DM)	1.5168	+0.0036	165 - 170	1.5180	1.5087	1.5139	2.3	1.5079	2.3	1.4831	2.2	107.8
Greece	(Dr)	238.600	+0.035	550 - 650	238.990	237.690	240.155	-7.8	242.725	-6.9	253.75	-6.3	67.1
Ireland	(I£)	1.6455	-0.0035	450 - 460	1.6555	1.6445	1.645	0.3	1.6447	0.2	1.6418	0.2	-
Italy	(L)	1521.69	+1.93	100 - 238	1522.45	1515.43	1524.85	-2.5	1531.28	-2.5	1544.33	-1.5	78.6
Luxembourg	(LFr)	31.2700	+0.1	500 - 900	31.3030	31.0740	31.21	2.3	31.0825	2.4	30.5425	2.3	105.7
Netherlands	(Fl)	1.7012	+0.0049	008 - 016	1.7020	1.6914	1.6974	2.7	1.6894	2.8	1.6539	2.8	105.8
Norway	(NKr)	6.3739	+0.0166	720 - 757	6.4072	6.3185	6.3701	0.7	6.3645	0.6	6.3389	0.5	99.2
Portugal	(Es)	153.475	+0.25	450 - 500	153.570	153.000	153.69	-1.6	153.975	-1.3	154.75	-0.8	95.8
Spain	(Pta)	127.655	+0.18	640 - 670	127.690	127.140	127.835	-1.7	128.095	-1.4	128.75	-0.9	79.9
Sweden	(SKr)	6.6203	+0.0189	165 - 240	6.6261	6.5884	6.6175	0.5	6.6077	0.8	6.5603	0.9	89.3
Switzerland	(SFr)	1.2757	+0.0064	753 - 761	1.2770	1.2620	1.2719	3.6	1.2641	3.7	1.2312	3.5	107.8
UK	(£)	1.6457	-0.0012	453 - 462	1.6580	1.6435	1.6446	0.8	1.6424	0.8	1.6301	0.9	90.9
Ecu	-	1.2851	-0.0028	846 - 856	1.2708	1.2845	1.2864	-1.3	1.2896	-1.4	1.2881	-1.7	-
SDR†	-	0.690718	-	-	-	-	-	-	-	-	-	-	-
Americas													
Argentina	(Peso)	0.9999	-	998 - 999	0.9999	0.9998	-	-	-	-	-	-	-
Brazil	(R$)	1.0276	-	275 - 277	1.0278	1.0275	-	-	-	-	-	-	-
Canada	(C$)	1.3341	-0.0017	338 - 343	1.3370	1.3336	1.3317	2.1	1.3267	2.2	1.2992	2.6	85.7
Mexico	(New Peso)	7.8655	-0.039	630 - 680	7.9020	7.8620	8.0095	-18.0	8.27	-19.5	9.1305	-15.8	-
USA	($)	-	-	-	-	-	-	-	-	-	-	-	97.9
Pacific/Middle East/Africa													
Australia	(A$)	1.2702	-0.0004	698 - 706	1.2709	1.2697	1.2717	-1.4	1.2736	-1.1	1.2791	-0.7	95.0
Hong Kong	(HK$)	7.7325	+0.0001	320 - 330	7.7332	7.7319	7.7324	0.0	7.7329	0.0	7.744	-0.1	-
India	(Rs)	35.6900	+0.015	400 - 400	35.7700	35.6550	35.905	-7.2	36.366	-7.5	-	-	-
Israel	(Shk)	3.2482	+0.0017	449 - 514	3.2520	3.2434	-	-	-	-	-	-	-
Japan	(Y)	114.050	+0.26	000 - 100	114.120	113.550	113.575	5.0	112.57	5.2	108.97	5.0	127.9
Malaysia	(M$)	2.5244	-0.0009	240 - 247	2.5265	2.5215	2.5272	-1.4	2.5326	-1.3	2.5539	-1.2	-
New Zealand	(NZ$)	1.4070	-0.0039	065 - 075	1.4081	1.4064	1.4125	-4.7	1.4165	-2.8	1.4489	-2.9	-
Philippines	(Peso)	26.2550	-0.025	200 - 900	26.2900	26.2200	-	-	-	-	-	-	-
Saudi Arabia	(SR)	3.7505	-	503 - 507	3.7506	3.7502	3.7508	-0.1	3.7512	-0.1	3.7531	-0.1	-
Singapore	(S$)	1.4081	+0.0009	077 - 084	1.4085	1.4073	1.4059	1.8	1.4013	1.9	1.3801	2.0	-
South Africa	(R)	4.7035	+0.003	010 - 060	4.7070	4.6925	4.7442	-10.4	4.8192	-9.8	5.164	-9.2	-
South Korea	(Won)	826.750	+0.95	500 - 000	827.200	825.900	-	-	-	-	-	-	-
Taiwan	(T$)	27.5000	-	800 - 200	27.5290	27.4710	27.5001	0.0	27.5003	0.0	-	-	-
Thailand	(Bt)	25.5075	+0.018	050 - 100	25.5120	25.4970	25.5975	-4.2	25.765	-4.0	26.4025	-3.5	-

† SDR rate per $ for Nov 4. Bid/offer spreads in the Dollar Spot table show only the last three decimal places. Forward rates are not directly quoted to the market but are implied by current interest rates. UK, Ireland & ECU are quoted in US currency. J.P. Morgan nominal indices Nov 4: Base average 1990=100.

WORLD INTEREST RATES

MONEY RATES

November 5	Over night	One month	Three mths	Six mths	One year	Lomb. Inter.	Dis. rate	Repo rate
Belgium	3⅛	3⅛	3⅛	3⅛	3⅛	6.00	2.50	-
week ago	3⅛	3⅛	3⅛	3¼	3¼	6.00	2.50	-
France	3⅛	3¼	3⅜	3½	3⅝	3.20	-	4.75
week ago	3⅛	3¼	3⅜	3½	3⅝	3.35	-	4.75
Germany	3⅛	3⅛	3⅛	3⅛	3⅛	4.50	2.50	3.00
week ago	2⅞	3⅛	3¼	3⅛	3⅛	4.50	2.50	3.00
Ireland	5½	5⅝	5⅝	5⅝	5⅝	-	-	6.25
week ago	5⅝	5¾	5⅝	5⅝	5¾	-	-	6.25
Italy	7⅝	7⅝	7⅜	7⅛	7⅛	9.00	7.50	8.38
week ago	7¾	7⅝	7⅜	7⅛	7⅛	9.00	7.50	8.38
Netherlands	2⅞	2⅞	2⅞	3⅛	3⅛	-	3.00	3.30
week ago	2⅞	2⅞	2⅞	2⅞	3⅛	-	3.00	3.30
Switzerland	1¾	1¾	1⅞	2⅛	2⅛	-	1.00	-
week ago	1⅝	1¾	1⅞	1⅞	1⅞	-	1.00	-
US	5⅛	5¼	5⅜	5½	5⅝	-	5.00	-
week ago	5¼	5¼	5⅜	5½	5⅝	-	5.00	-
Japan	½	½	½	½	½	-	0.50	-
week ago	½	½	½	½	½	-	0.50	-
■ $ LIBOR FT London								
Interbank Fixing	-	5⅜	5⅜	5⅝	5⅞	-	-	-
week ago	-	5⅜	5⅜	5⅝	5⅞	-	-	-
US Dollar CDs	-	5.11	5.08	5.13	5.27	-	-	-
week ago	-	5.11	5.10	5.16	5.34	-	-	-
ECU Linked Ds	-	4⅛	4⅛	4⅛	4⅛	-	-	-
week ago	-	4⅛	4⅛	4⅛	4⅛	-	-	-
SDR Linked Ds	-	3⅜	3⅜	3⅜	3½	-	-	-
week ago	-	3⅜	3⅜	3⅜	3⅜	-	-	-

$ LIBOR interbank fixing rates are offered rates for $10m quoted to the market by four reference banks at 11am each working day. The banks are: Bankers Trust, Bank of Tokyo Mitsubishi, Barclays and National Westminster.

Mid rates are shown for the domestic Money Rates, US$ CDs, ECU & SDR Linked Deposits (Ds).

EURO CURRENCY INTEREST RATES

Nov 5	Short term	7 days notice	One month	Three months	Six months	One year
Belgian Franc	3⅛ - 2⅞	3⅛ - 2⅞	3⅛ - 3	3⅛ - 3	3⅛ - 3	3⅛ - 3
Danish Krone	3⅜ - 3¼	3⅝ - 3½	3⅝ - 3½	3⅝ - 3½	3⅝ - 3½	3⅝ - 3½
D-Mark	3⅛ - 2⅞	3⅛ - 3	3⅛ - 3	3⅛ - 3	3¼ - 3	3⅜ - 3⅛
Dutch Guilder	2⅝ - 2½	2⅞ - 2¾	2⅞ - 2¾	3 - 2⅞	3⅛ - 3	3¼ - 3⅛
French Franc	3⅜ - 3¼	3⅜ - 3¼	3⅜ - 3¼	3½ - 3⅜	3⅝ - 3½	3¾ - 3⅝
Portuguese Esc.	6⅞ - 6¾	6⅞ - 6¾	6⅞ - 6¾	6⅞ - 6¾	6⅞ - 6¾	6⅞ - 6¾
Spanish Peseta	6⅝ - 6½	6⅝ - 6½	6⅝ - 6½	6½ - 6⅜	6¼ - 6⅛	6⅛ - 5⅞
Sterling	6¼ - 6⅛	6⅛ - 6⅛	6¼ - 6⅛	6⅜ - 6¼	6⅝ - 6½	6⅞ - 6¾
Swiss Franc	1⅞ - 1¾	1⅞ - 1¾	1⅞ - 1¾	2⅛ - 1⅞	2⅛ - 2	2⅜ - 2¼
Can. Dollar	3⅛ - 3	3⅛ - 3	3⅛ - 3	3⅜ - 3¼	3¼ - 3⅛	3⅞ - 3¾
US Dollar	5¼ - 5⅛	5¼ - 5⅛	5⅜ - 5¼	5½ - 5⅜	5⅝ - 5½	5⅞ - 5¾
Italian Lira	7⅞ - 7¾	7⅞ - 7¾	7⅞ - 7¾	7⅝ - 7½	7⅜ - 7¼	7⅛ - 6⅞
Yen	⅜ - ¼	⅜ - ¼	½ - ⅜	½ - ⅜	½ - ½	¾ - ⅝
Asian $Sing	3⅜ - 3¼	3⅜ - 3¼	3⅜ - 3¼	3⅜ - 3¼	3⅜ - 3¼	3½ - 3⅜

Short term rates are call for the US Dollar and Yen, others: two days' notice.

■ **THREE MONTH PIBOR FUTURES** (MATIF) Paris interbank offered rate (FFr 5m)

	Open	Sett price	Change	High	Low	Est. vol	Open int.
Dec	96.44	96.46	+0.02	96.47	96.42	14,360	52,681
Mar	96.35	96.39	+0.04	96.40	96.33	16,391	54,114
Jun	96.29	96.34	+0.06	96.36	96.27	6,451	30,881

■ **THREE MONTH EUROMARK FUTURES** (LIFFE)* DM1m points of 100%

	Open	Sett price	Change	High	Low	Est. vol	Open int.
Dec	96.78	96.80	+0.02	96.82	96.78	29695	212154
Mar	96.72	96.78	+0.06	96.80	96.72	37524	192264
Jun	96.53	96.63	+0.11	96.65	96.52	61360	167893
Sep	96.29	96.41	+0.14	96.43	96.27	48034	154157

■ **THREE MONTH EUROLIRA FUTURES** (LIFFE)* L1000m points of 100%

	Open	Sett price	Change	High	Low	Est. vol	Open int.
Dec	92.66	92.74	+0.08	92.77	92.64	26576	69093
Mar	93.23	93.36	+0.13	93.38	93.22	17689	87679
Jun	93.48	93.61	+0.13	93.62	93.46	6811	34411
Sep	93.56	93.68	+0.12	93.68	93.55	2180	22311

■ **THREE MONTH EURO SWISS FRANC FUTURES** (LIFFE) SFr1m points of 100%

	Open	Sett price	Change	High	Low	Est. vol	Open int.
Dec	97.85	97.88	+0.06	97.90	97.80	9393	29325
Mar	97.79	97.84	+0.07	97.85	97.72	11861	30814
Jun	97.64	97.64	+0.07	97.65	97.51	3477	15692
Sep	97.35	97.40	+0.05	97.43	97.31	433	5666

■ **THREE MONTH EUROYEN FUTURES** (LIFFE) Y100m points of 100%

	Open	Sett price	Change	High	Low	Est. vol	Open int.
Dec		99.44	-			0	n/a
Mar	99.38	99.38	+0.01	99.38	99.38	10	n/a
Jun		99.27	+0.02			0	n/a

■ **THREE MONTH ECU FUTURES** (LIFFE) Ecu1m points of 100%

	Open	Sett price	Change	High	Low	Est. vol	Open int.
Dec	95.79	95.83	+0.04	95.83	95.79	1480	7634
Mar	95.77	95.83	+0.06	95.83	95.76	848	5297
Jun	95.73	95.77	+0.09	95.77	95.73	96	3537
Sep	95.60	95.66	+0.10	95.67	95.60	292	3118

* LIFFE futures also traded on APT

CROSS RATES AND DERIVATIVES

EXCHANGE CROSS RATES

Nov 5		BFr	DKr	FFr	DM	I£	L	Fl	NKr	Es	Pta	SKr	SFr	£	C$	$	Y	Ecu
Belgium	(BFr)	100	18.64	16.39	4.860	1.943	4866	5.441	20.38	490.9	408.3	21.18	4.079	1.945	4.267	3.198	364.7	2.528
Denmark	(DKr)	53.65	10	8.797	2.603	1.043	2611	2.920	10.94	263.4	219.1	11.37	2.189	1.043	2.290	1.716	195.7	1.357
France	(FFr)	61.00	11.37	10	2.959	1.185	2968	3.319	12.43	299.4	249.1	12.92	2.488	1.185	2.603	1.951	222.5	1.542
Germany	(DM)	20.62	3.842	3.380	1	0.401	1003	1.122	4.203	101.2	84.17	4.367	0.841	0.401	0.880	0.659	75.20	0.521
Ireland	(I£)	51.46	9.590	8.436	2.496	1	2504	2.800	10.49	252.6	210.1	10.90	2.098	1.000	2.196	1.646	187.7	1.301
Italy	(L)	2.055	0.383	0.337	0.100	0.040	100.	0.112	0.419	10.09	8.391	0.435	0.084	0.040	0.088	0.066	7.496	0.052
Netherlands	(Fl)	18.38	3.425	3.013	0.891	0.357	894.5	1	3.746	90.21	75.04	3.893	0.750	0.357	0.784	0.588	67.04	0.465
Norway	(NKr)	49.06	9.142	8.042	2.379	0.953	2387	2.669	10	240.8	200.3	10.39	2.001	0.953	2.093	1.569	178.9	1.240
Portugal	(Es)	20.37	3.797	3.340	0.988	0.396	991.5	1.108	4.153	100.	83.17	4.315	0.831	0.396	0.869	0.652	74.31	0.515
Spain	(Pta)	24.49	4.564	4.015	1.188	0.476	1192	1.333	4.993	120.2	100.	5.188	0.999	0.476	1.045	0.783	89.34	0.619
Sweden	(SKr)	47.21	8.798	7.739	2.290	0.917	2297	2.569	9.624	231.7	192.8	10	1.926	0.917	2.015	1.510	172.2	1.194
Switzerland	(SFr)	24.52	4.569	4.019	1.189	0.476	1193	1.334	4.998	120.3	100.1	5.193	1	0.476	1.046	0.784	89.42	0.620
UK	(£)	51.46	9.590	8.436	2.496	1.000	2504	2.800	10.49	252.6	210.1	10.90	2.099	1	2.196	1.646	187.7	1.301
Canada	(C$)	23.43	4.367	3.842	1.137	0.455	1140	1.275	4.777	115.0	95.67	4.964	0.956	0.455	1	0.750	85.47	0.592
US	($)	31.26	5.826	5.125	1.516	0.608	1521	1.701	6.373	153.5	127.6	6.622	1.275	0.608	1.334	1	114.0	0.790
Japan	(Y)	27.42	5.109	4.494	1.330	0.533	1334	1.492	5.589	134.6	111.9	5.807	1.118	0.533	1.170	0.877	100.	0.693
Ecu		39.55	7.371	6.484	1.919	0.769	1925	2.152	8.063	194.2	161.5	8.378	1.613	0.769	1.688	1.265	144.3	1

Danish Kroner, French Franc, Norwegian Kroner, and Swedish Kronor per 10; Belgian Franc, Yen, Escudo, Lira and Peseta per 100.

■ **D-MARK FUTURES** (IMM) DM 125,000 per DM

	Open	Latest	Change	High	Low	Est. vol	Open int.
Dec	0.6656	0.6618	-0.0019	0.6647	0.6617	14,296	58,135
Mar	0.6658	0.6662	-0.0013	0.6663	0.6658	439	4,081
Jun	-	0.6700	-0.0013	-	0.6700	105	2,477

■ **SWISS FRANC FUTURES** (IMM) SFr 125,000 per SFr

	Open	Latest	Change	High	Low	Est. vol	Open int.
Dec	0.7933	0.7895	-0.0032	0.7951	0.7873	12,933	44,334
Mar	0.7929	0.7954	-0.0039	0.7991	0.7929	376	3,380
Jun	-	0.8022	-0.0037	-	0.8022	3	613

■ **JAPANESE YEN FUTURES** (IMM) Yen 12.5 per Yen 100

	Open	Latest	Change	High	Low	Est. vol	Open int.
Dec	0.8838	0.8847	+0.0014	0.8855	0.8819	16,859	72,092
Mar	0.8935	0.8951	+0.0005	0.8953	0.8936	75	3,158
Jun	-	0.9060	-	-	-	1	503

■ **STERLING FUTURES** (IMM) £62,500 per £

	Open	Latest	Change	High	Low	Est. vol	Open int.
Dec	1.6442	1.6484	+0.0040	1.6540	1.6420	8,213	59,784
Mar	1.6476	1.6454	+0.0042	1.6490	1.6460	70	778
Jun	-	1.6410	+0.0040	1.6440	-	154	157

UK INTEREST RATES

LONDON MONEY RATES

Nov 5	Over-night	7 days notice	One month	Three months	Six months	One year
Interbank Sterling	6⅛ - 5⅞	6⅛ - 6⅛	6¼ - 6⅛	6⅜ - 6¼	6½ - 6¼	6¾ - 6⅝
Sterling CDs	-	-	6⅛ - 6⅛	6⅜ - 6⅛	6⅝ - 6⅜	6⅞ - 6⅝
Treasury Bills	-	-	5⅞ - 5⅞	5⅞ - 5⅞	-	-
Bank Bills	-	-	5⅞ - 5⅞	6 - 5⅞	6⅛ - 6⅛	-
Local authority deps.	6⅛ - 6	6 - 6¼	6⅛ - 6	6⅛ - 6⅛	6⅜ - 6⅜	6⅝ - 6½
Discount Market deps	6¼ - 5	6⅛ - 6	-	-	-	-

UK clearing bank base lending rate 6 per cent from October 30, 1996

	Up to 1 month	1-3 month	3-6 months	6-9 months	9-12 months
Certs of Tax dep. (£100,000)	2½	5½	5	5	4¾

Certs of Tax dep. under £100,000 is 2½pc. Deposits withdrawn for cash 1½pc. Ave. tender rate of discount on Nov 1, 5.8592pc. ECGD fixed rate Stlg. Export Finance. Make up day Oct 31, 1996. Agreed rate for period Nov 26, 1996 to Dec 24, 1996, Scheme III 7.25pc. Reference rate for period Oct 1, 1996 to Oct 31, 1996, Schemes IV & V 6.001pc. Finance House Base Rate 6pc from Nov 1, 1996

■ **THREE MONTH STERLING FUTURES** (LIFFE) £500,000 points of 100%

	Open	Sett price	Change	High	Low	Est. vol	Open int.
Dec	93.67	93.69	+0.02	93.71	93.66	17818	98329
Mar	93.39	93.44	+0.05	93.47	93.37	27913	99968
Jun	93.10	93.16	+0.07	93.18	93.07	23477	100167
Sep	92.88	92.93	+0.05	92.96	92.86	9995	59422
Dec	92.69	92.76	+0.07	92.76	92.67	4770	44032

Also traded on APT. All Open interest figs. are for previous day.

■ **SHORT STERLING OPTIONS** (LIFFE) £500,000 points of 100%

Strike Price	CALLS Dec	CALLS Mar	CALLS Jun	PUTS Dec	PUTS Mar	PUTS Jun
9350	0.21	0.15	0.15	0.02	0.21	0.49
9375	0.04	0.06	0.08	0.10	0.37	0.67
9400	0	0.02	0.04	0.31	0.58	0.88

Est. vol. total, Calls 14048 Puts 4724. Previous day's open int., Calls 179990 Puts 148162

■ **EMS EUROPEAN CURRENCY UNIT RATES**

Nov 5	Ecu cen. rates	Rate against Ecu	Change on day	% +/- from cen. rate	% spread v weakest	Div. ind.
Ireland	0.792214	0.771954	-0.004324	-2.56	4.50	17
Portugal	195.792	195.258	+0.384	-0.27	2.11	2
Finland	5.80661	5.79395	+0.01141	-0.22	2.06	1
Spain	162.493	162.353	+0.057	-0.09	1.92	1
Netherlands	2.15214	2.16305	+0.00284	0.51	1.32	-4
Belgium	39.3960	39.7410	+0.0426	0.88	0.95	-8
Germany	1.91007	1.92890	+0.00196	0.99	0.84	-10
Austria	13.4383	13.5727	+0.0135	1.00	0.82	-7
Denmark	7.28580	7.41123	+0.00874	1.72	0.11	-12
France	6.40608	6.52329	+0.00663	1.83	0.00	-15
NON ERM MEMBERS						
Greece	292.867	303.800	+0.016	3.73	-1.83	-
Italy	2106.15	1937.23	+1.82	-8.02	10.71	-
UK	0.786652	0.771393	-0.005543	-1.94	3.84	-

Ecu central rates set by the European Commission. Currencies are in descending relative strength. Percentage changes are for Ecu; a positive change denotes a weak currency. Divergence shows the ratio between two spreads: the percentage difference between the actual market and Ecu central rates for a currency, and the maximum permitted percentage deviation of the currency's market rate from its Ecu central rate.

(17/9/92) Sterling and Italian Lira suspended from ERM. Adjustment calculated by the Financial Times.

■ **PHILADELPHIA SE £/$ OPTIONS** £31,250 (cents per pound)

Strike Price	CALLS Nov	CALLS Dec	CALLS Jan	PUTS Nov	PUTS Dec	PUTS Jan
1.620	-	-	-	0.18	0.79	1.21
1.630	2.01	2.61	2.99	0.39	1.12	1.58
1.640	1.35	2.06	2.51	0.72	1.53	2.01
1.650	0.83	1.58	1.99	1.21	2.04	2.51
1.660	0.47	1.17	1.57	1.85	2.58	3.05

Previous day's vol., Calls N/A Puts N/A. Prev. day's open int., Calls N/A Puts N/A

■ **THREE MONTH EURODOLLAR** (IMM) $1m points of 100%

	Open	Latest	Change	High	Low	Est. vol	Open int.
Dec	94.48	94.50	+0.02	94.60	94.48	28,794	458,457
Mar	94.43	94.46	+0.03	94.47	94.43	42,992	373,864
Jun	94.32	94.35	+0.04	94.36	94.32	30,661	288,161

■ **US TREASURY BILL FUTURES** (IMM) $1m per 100%

	Open	Latest	Change	High	Low	Est. vol	Open int.
Dec	95.01	95.01	+0.01	95.01	95.01	389	3,744
Mar	94.94	94.94	+0.03	94.94	94.94	377	2,523
Jun	-	94.82	+0.03	94.83	-	84	1,470

All Open interest figs. are for previous day

■ **EUROMARK OPTIONS** (LIFFE) DM1m points of 100%

Strike Price	CALLS Nov	CALLS Dec	CALLS Jan	CALLS Mar	PUTS Nov	PUTS Dec	PUTS Jan	PUTS Mar
9675	0.07	0.08	0.10	0.14	0.02	0.03	0.07	0.11
9700	0	0	0.02	0.04	0.20	0.20	0.24	0.26
9725	0	0	0	0.01	0.45	0.45	0.47	0.48

Est. vol. total, Calls 15641 Puts 6900. Previous day's open int., Calls 434884 Puts 317388

■ **EURO SWISS FRANC OPTIONS** (LIFFE) SFr 1m points of 100%

Strike Price	CALLS Dec	CALLS Mar	CALLS Jun	PUTS Dec	PUTS Mar	PUTS Jun
9800	0.09	0.19	0.22	0.21	0.35	0.56
9825	0.03	0.10	0.13	0.40	0.51	0.74

Est. vol. total, Calls 0 Puts 0. Previous day's open int., Calls 4238 Puts 2150

■ **EUROLIRA OPTIONS** (LIFFE) L1000m points of 100%

Strike Price	CALLS Dec	CALLS Mar	CALLS Jun	PUTS Dec	PUTS Mar	PUTS Jun
9250	0.29	0.92	1.18	0.05	0.06	0.07
9275	0.13	0.70	0.97	0.14	0.08	0.11
9300	0.04	0.50	0.77	0.30	0.14	0.16

Est. vol. total, Calls 5376 Puts 4928. Previous day's open int., Calls 123518 Puts 88026

BASE LENDING RATES

	%		%		%
Adam & Company	6.00	Cyprus Popular Bank	6.00	NatWestminster	6.00
Allied Irish Bank (GB)	6.00	Duncan Lawrie	6.00	•Rea Brothers	6.00
Allied Trust Bank	6.00	Exeter Bank Limited	7.00	Royal Bk of Scotland	5.75
•Henry Ansbacher	6.00	Financial & Gen Bank	7.00	•Singer & Friedlander	6.00
Bank of Baroda	6.00	•Robert Fleming & Co	6.00	•Smith & Williamson Secs	6.00
Banco Bilbao Vizcaya	6.00	Girobank	5.75	Scottish Widows Bank	6.00
Bank of Cyprus	6.00	•Guinness Mahon	6.00	TSB	6.00
Bank of Ireland	6.00	Habib Bank AG Zurich	6.00	United Bank of Kuwait	6.00
Bank of India	6.00	•Hambros Bank	6.00	Unity Trust Bank Plc	5.75
Bank of Scotland	5.75	Heritable & Gen Inv Bk	6.00	Western Trust	6.00
Barclays Bank	6.00	•Hill Samuel	5.75	Whiteaway Laidlaw	6.00
Brit Bk of Mid East	6.00	C. Hoare & Co	6.00	Yorkshire Bank	5.75
•Brown Shipley & Co Ltd	6.00	Hongkong & Shanghai	6.00		
Citibank NA	6.00	Julian Hodge Bank	6.00		
Clydesdale Bank	6.00	•Leopold Joseph & Sons	6.00		
The Co-operative Bank	6.00	Lloyds Bank	6.00		
Coutts & Co	6.00	Midland Bank	5.75		
Credit Lyonnais	6.00	*Mount Credit Corp	6.25		

● Members of London Investment Banking Association

* In administration

COMMODITIES AND AGRICULTURE

Surge in US demand buoys market for LPG

By Deborah Hargreaves

Prices for liquefied petroleum gas have risen strongly over the past two months as demand in the US has surged. The booming market has hit US petrochemicals producers hard, along with other companies which use propane and butane as raw materials.

LPG contract prices from Saudi Arabia – the main supplier – were recently fixed at $250 a tonne for both propane and butane, an increase of almost $50 a tonne from the October price and higher than most analysts' expectations.

"The market has been strong all year – we thought it would peak early and fall off, but the latest Saudi contract prices make us think there won't be a peak until January," said Mr Ron Gisd, associate at Purvin & Gertz, the Houston-based oil analysts.

Spot prices in the US are currently at 52 cents a gallon, and Mr Gisd believes the market will average 60 cents a gallon in January. "That's just an average – there are likely to be higher price spikes in cold weather," he said.

The LPG market has been bolstered by the recent strength of prices for crude oil and refined products such as heating oil and jet fuel. Strong naphtha prices have encouraged some ethylene producers to use LPG as a feed stock to save costs on naphtha, but this has led to an escalating upwards spiral in prices.

British Petroleum said yesterday that the higher cost of naphtha had dampened the rise in profits at its chemicals unit for the third quarter.

Argus LPG World, the trade publication for the liquefied petroleum gas industry, noted that prices for butane are at their highest levels for 18 months and that the propane market is stronger than in February, which is the time of peak demand for the product as a heating fuel.

US propane and butane stocks are at their lowest levels since the Gulf war at 51m barrels, down from 56.5m barrels in October 1995. Supplies on the US Gulf coast are particularly tight and these are usually drawn on later in the winter to replenish the main consuming centres in the north-east of the US.

World supplies have become tighter since an explosion in July closed a large Pemex gas plant in Mexico which produced one-third of the country's needs. Since then, Mexico has been forced to become a net importer of LPG, rather than a net exporter.

Propane and butane are used for cooking and heating in Asia. The US uses 300,000 barrels a day of propane in ethylene production as well as for agricultural uses. Demand remains strong across the globe as consumers chase tight supplies.

BP results, see UK Company News

Signs seen of fresh interest in gold

By Kenneth Gooding, Mining Correspondent

There are signs that investors are taking a fresh look at gold in the final quarter of this year because of worries about a possible sharp technical fall in share prices, according to CPM, the New York based precious metals consultancy.

However, it suggests that the gold price is unlikely to react until investors "return forcefully, possibly toward the middle of 1997".

In its latest survey, CPM recalls that a surge in investor interest pushed gold to nearly $420 a troy ounce in January and February this year but in March investment demand for physical metal faded and the price fell back below $400. Gold closed in London yesterday at $379.45.

Investors will add about 2.2m ounces to their net holdings this year, CPM suggests, 47 per cent more than in 1995. Net investment demand could reach 3.9m ounces next year.

Net sales of gold by central banks – another key factor in the market – are projected to reach 10m ounces in both 1996 and 1997. Some 2m ounces of next year's total could be provided by the International Monetary Fund, which is expected to sell 5m ounces in all.

"These sales are not expected to disrupt the gold market," CPM insists. It suggests 89m ounces of newly refined gold will reach the market this year, 4.2 per cent more than in 1995. This supply is forecast to increase next year by another 2.2 per cent to 91m ounces.

Gold Survey 1996. CPM Group, 37th floor, 30 Broad Street, New York, NY 10004. $55.

Crude oil edges higher

MARKETS REPORT

By Robert Corzine and Kenneth Gooding

Crude oil prices edged upwards yesterday after six days of steady losses shaved about $2.50 a barrel off the price of the benchmark Brent Blend for December delivery. It was quoted at $22.35 a barrel in late London trading, seven cents up on Monday's close.

British Petroleum yesterday said it expected oil prices to remain relatively firm in the fourth quarter. But the recent oil price rally has done little to change BP's longer-term view. It still expects average prices to remain in the $16–$18 range over the long term, said company executives.

Prices of refined products such as gas oil and jet fuel weakened yesterday, as traders waited for the latest inventory statistics from the American Petroleum Institute. November gas oil futures on London's International Petroleum Exchange closed 50 cents down at $208.50 a tonne.

On the London Metal Exchange tin retested the 17-month low of $5,890 a tonne it reached on Monday. A "bear" raid has driven the price down from a 1996 high of $6,650.

Mr Ted Arnold, an analyst at Merrill Lynch, said it was too early to expect a strong price recovery on the back of consumer demand. Supplies of tin "come out of the woodwork" at the right price, he suggested – and the right price seemed to have moved down from $6,800 to $6,400.

Noranda of Canada has closed its Heath Steele zinc and lead mine in New Brunswick after an explosion killed one miner and injured another on Monday.

Production is not expected to be interrupted for long at the mine, which produces 100,000 tonnes a year of zinc concentrate and a little lead concentrate.

Zinc prices brushed aside the potential impact, even though this is the second disruption Noranda has suffered in recent months. It lost an estimated 40,000 tonnes of zinc metal when its Brunswick mine was affected by seismic activity.

LME WAREHOUSE STOCKS
(As at Thursday's close) tonnes

Aluminium	-3,425	to 966,000
Aluminium alloy	-100	to 77,260
Copper	-2,525	to 121,175
Lead	-400	to 116,275
Nickel	+720	to 43,134
Zinc	-550	to 541,025
Tin	-145	to 9,820

Price rises put spotlight on hedging

Industrial companies which had taken stable raw materials prices for granted have had to think again this year.

Soaring wheat prices in May, a sliding copper market three months later, and now fuel prices standing close to a five-year high have forced many commodities users to re-write financial plans.

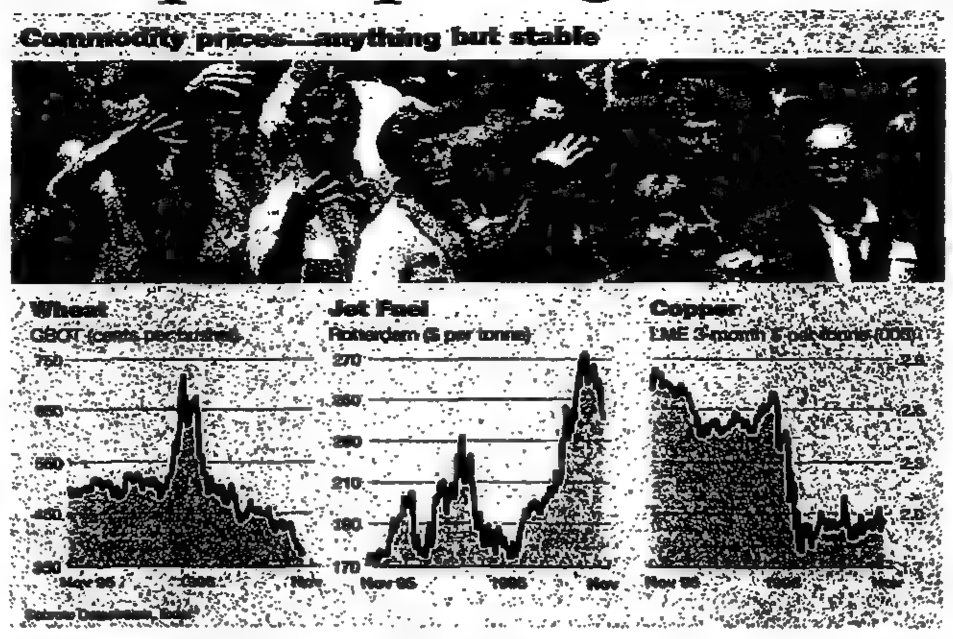
While companies stress that raw materials make up a small part of their cost base, they usually respond to rising commodity prices by lifting product prices.

Most airlines, for example, were caught unawares by the recent rise in jet-fuel prices after five years of stability. British Airways recently increased its European fares 2.5 per cent partly as a result of soaring fuel costs, while Japan Airlines last week blamed higher fuel prices for a 61 per cent fall in first-half profits.

Food companies such as Nestlé, as well as breadmakers and biscuit-makers, were hit hard by sharp increases in grain prices earlier this year and a surge in the coffee market two years ago.

However, companies do not have to see their bottom lines savaged by a jump in fuel or flour bills. On most large commodities, brokers offer simple hedges which act like insurance contracts, guaranteeing payment of a certain price on a set date.

Commodity prices—anything but stable



Most corporate consumers hedge against rising costs, but many had become complacent in recent years about stable and falling commodities prices.

"I have been quite surprised at the way the industry has tended to disregard fuel as an important part of its cost base," says Mr William Gaillard, at the International Air Transport Association in Geneva.

British Airways says it has a hedging policy, but declines to give details. US carriers have traditionally been more reluctant to hedge costs, because of a conservative approach to derivatives markets.

Most fuel contracts for users such as airlines, freight companies, bus operators and industrial consumers like British Steel are priced on a monthly basis at a premium or a discount to the average quoted energy cost. Brokers offer a range of contracts allowing users to lock in to a price for a longer period.

For example, Mr Lindsay Horn, executive director of energy derivatives at Lehman Brothers in London, explains that an airline could buy into a fixed-for-floating-rate oil swap now which would guarantee its prices for buying jet fuel next summer. The airline would continue to buy from its traditional suppliers, but the broker would take on the risk of the floating-rate price payment, leaving the airline to pay a fixed price.

Mining companies and some oil producers have traditionally used commodity futures and derivative products to fix a price for sales of future production.

Another factor likely to encourage consumers and producers to turn increasingly towards hedging is a move towards just-in-time delivery. This has seen companies carrying much lower stocks of raw materials as a buffer against volatile prices.

The oil industry's decision to carry lower stocks has been one reason for the recent rise in oil prices.

Mr Celsius Lodder, head of the International Coffee Organisation, the producers and consumers body, predicted last week that moves towards just-in-time roasting and savage cuts in coffee inventories would force exporters, traders and processors to resort to sophisticated financial mechanisms to offset price volatility.

"Risk management, similar to an insurance contract, will become an increasingly important instrument for the industry," he said in a speech in Bogota.

Cynics say that those companies that do hedge can gain from a period of commodity price volatility by raising their own prices – so increasing their margins while competitors struggle to cover higher costs.

Deborah Hargreaves

COMMODITIES PRICES

BASE METALS

LONDON METAL EXCHANGE
(Prices from Amalgamated Metal Trading)

■ ALUMINIUM, 99.7 PURITY ($ per tonne)

	Cash	3 mths
Close	1404-5	1430-31
Previous	1398.5-99.5	1427-27.5
High/low	1403	1437/1426
AM Official	1402.5-3.0	1429.5-30.0
Kerb close		1432-3
Open int.	238,951	
Total daily turnover	62,599	

■ ALUMINIUM ALLOY ($ per tonne)

	Cash	3 mths
Close	1250-55	1280-83
Previous	1248-53	1278-80
High/low		1285/1280
AM Official	1250-52	1280-1
Kerb close		1285-90
Open int.	8,256	
Total daily turnover	1,112	

■ LEAD ($ per tonne)

	Cash	3 mths
Close	740.5-1.5	743-4
Previous	736-37	740-41
High/low	741.5/741	745/738
AM Official	741-1.5	742-3
Kerb close		743-4
Open int.	39,758	
Total daily turnover	9,611	

■ NICKEL ($ per tonne)

	Cash	3 mths
Close	7035-45	7150-55
Previous	7035-45	7145-50
High/low		7165/7120
AM Official	7040-45	7150-55
Kerb close		7150-55
Open int	47,195	
Total daily turnover	12,004	

■ TIN ($ per tonne)

	Cash	3 mths
Close	5830-40	5900-05
Previous	5835-45	5910-15
High/low	5830	5920/5890
AM Official	5830-35	5895-900
Kerb close		5900-05
Open int.	15,439	
Total daily turnover	4,505	

■ ZINC, special high grade ($ per tonne)

	Cash	3 mths
Close	1038-9	1062.5-3.0
Previous	1043-44	1066-67
High/low	1038	1066/1061
AM Official	1038.0-8.5	1062-2.5
Kerb close		1061-61.5
Open int	82,735	
Total daily turnover	16,365	

■ COPPER, grade A ($ per tonne)

	Cash	3 mths
Close	2006-8	1967-8
Previous	2012.5-14.5	1971-72
High/low	2013/2010	1980/1957
AM Official	2013-4	1972-3
Kerb close		1961-2
Open int.	170,264	
Total daily turnover	46,032	

■ LME AM Official £/$ rate: 1.6691
LME Closing £/$ rate: 1.6457
Spot: 1.6473 3 mths: 1.6441 6 mths: 1.6401 9 mths: 1.6357

■ HIGH GRADE COPPER (COMEX)

[illegible]

PRECIOUS METALS

■ LONDON BULLION MARKET
(Prices supplied by N M Rothschild)

[illegible]

Precious Metals continued

■ GOLD COMEX (100 Troy oz.; $/troy oz.)

	Sett price	Day's change	High	Low	Vol	Open int
Nov	378.8	+0.1	-	-	-	-
Dec	379.8	-	380.5	379.4	7,988	98,887
Feb	381.8	+0.2	382.5	381.4	840	20,939
Apr	383.8	+0.2	384.7	383.7	72	12,166
Jun	386.1	+0.2	387.0	386.0	45	11,164
Aug	[illegible]	[illegible]	-	-	28	4,382
Total					9,603	192,814

■ PLATINUM NYMEX (50 Troy oz.; $/troy oz.)

	Sett price	Day's change	High	Low	Vol	Open int
Jan	384.1	-1.0	[illegible]	383.0	852	18,782
Apr	386.5	-1.1	[illegible]	386.0	13	8,122
Jul	388.5	-1.1	-	-	4	978
Oct	392.8	-1.1	-	-	4	136
Total					885	28,016

■ PALLADIUM NYMEX (100 Troy oz.; $/troy oz.)

	Sett price	Day's change	High	Low	Vol	Open int
Dec	117.85	+0.35	119.90	117.25	378	7,179
Mar	118.95	+0.35	120.50	118.50	294	813
Jun	119.95	+0.35	-	-	25	156
Total					697	8,149

■ SILVER COMEX (5,000 Troy oz.; Cents/troy oz.)

	Sett price	Day's change	High	Low	Vol	Open int
Nov	477.7	-1.5	479.0	479.0	11	11
Dec	479.3	-1.5	483.0	476.0	[illegible]	[illegible]
Jan	481.3	-1.5	-	-	-	26
Mar	485.9	-1.6	490.0	484.5	309	14,927
May	490.2	-1.6	493.5	489.5	35	6,626
Jul	494.6	-1.8	499.0	493.5	14	5,269
Total					3,693	96,405

ENERGY

■ CRUDE OIL NYMEX (1,000 barrels, $/barrel)

	Latest price	Day's change	High	Low	Vol	Open int
Dec	22.81	+0.02	23.08	22.65	34,962	85,874
Jan	22.56	+0.02	22.79	22.42	15,816	55,883
Feb	22.26	+0.03	22.45	22.13	6,031	36,520
Mar	21.92	+0.01	22.79	21.85	2,244	23,789
Apr	21.63	+0.04	21.78	21.48	850	16,069
May	21.26	-	21.37	21.26	2,308	11,932
Total					72,764	[illegible]

■ CRUDE OIL IPE ($/barrel)

	Latest price	Day's change	High	Low	Vol	Open int
Dec	22.22	-0.06	22.50	22.24	17,073	61,048
Jan	21.92	-0.05	22.16	21.93	8,385	53,287
Feb	21.47	-0.08	21.66	21.47	2,846	25,877
Mar	20.90	-0.06	21.19	20.99	1,606	28,234
Apr	20.52	-0.04	20.70	20.52	1,477	9,485
May	20.05	-0.03	20.21	20.05	424	4,865
Total					[illegible]	[illegible]

■ HEATING OIL NYMEX (42,000 US galls.; c/US galls.)

[illegible]

■ GAS OIL IPE ($/tonne)

[illegible]

■ NATURAL GAS NYMEX (10,000 mmBtu; $/mmBtu)

[illegible]

■ UNLEADED GASOLINE NYMEX (42,000 US galls.; c/US galls.)

[illegible]

GRAINS AND OIL SEEDS

■ WHEAT LIFFE (£ per tonne)

	Sett price	Day's change	High	Low	Vol	Open int
Nov	93.50	-0.25	93.60	93.00	54	118
Jan	94.50	-0.75	94.75	94.40	144	2,172
Mar	96.10	-0.60	96.30	95.75	197	1,617
May	97.30	-0.60	97.50	97.00	185	1,739
Jul	98.80	-0.70	98.75	98.75	10	294
Nov	95.25	-0.25	95.25	95.00	25	151
Total					595	6,291

■ WHEAT CBT (5,000bu min; cents/60lb bushel)

	Sett price	Day's change	High	Low	Vol	Open int
Dec	368.75	-11	379.50	366.00	8,671	30,558
Mar	364.00	-9.5	372.50	363.50	5,320	17,009
May	351.00	-7	358.00	350.00	926	2,919
Jul	339.75	-8	347.00	339.00	1,128	11,108
Sep	344.00	-6.5	348.50	349.50	-	290
Dec	351.60	-7	355.50	352.50	2	176
Total					17,848	62,194

■ MAIZE CBT (5,000 bu min; cents/56lb bushel)

	Sett price	Day's change	High	Low	Vol	Open int
Dec	258.50	-3.25	260.75	257.75	47,965	134,322
Mar	263.50	-4.25	267.00	262.75	16,353	95,835
May	268.75	-4.5	273.50	268.00	5,991	42,643
Jul	273.75	-5.25	277.50	273.25	6,258	34,458
Sep	270.50	-3.5	274.00	269.50	389	3,906
Dec	269.50	-4	273.25	268.75	3,344	29,251
Total					79,600	362,154

■ BARLEY LIFFE (£ per tonne)

	Sett price	Day's change	High	Low	Vol	Open int
Nov	91.50	+0.50	91.50	90.50	-	305
Jan	92.25	-0.60	92.25	92.25	-	739
Mar	93.50	-0.75	93.50	93.50	15	196
May	94.75	-0.70	94.75	94.75	15	110
Sep	91.00	-	-	-	-	1
Total					42	1,377

■ SOYABEANS CBT (5,000bu min; cents/60lb bushel)

	Sett price	Day's change	High	Low	Vol	Open int
Nov	670.00	+4	672.50	665.50	8,926	9,894
Jan	672.75	+2	676.00	668.50	35,464	73,600
Mar	677.50	+1.25	682.00	675.00	5,428	33,601
May	680.50	-	685.00	678.00	1,484	16,785
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

■ SOYABEAN OIL CBT (60,000lbs; cents/lb)

[illegible]

■ SOYABEAN MEAL CBT (100 tons; $/ton)

[illegible]

■ POTATOES LIFFE (£/tonne)

[illegible]

■ FREIGHT (BIFFEX) LIFFE ($10/index point)

[illegible]

SOFTS

■ COCOA LIFFE (£/tonne)

	Sett price	Day's change	High	Low	Vol	Open int
Dec	900	-4	902	895	1,730	25,803
Mar	933	-3	936	930	2,346	44,318
May	952	-3	954	950	1,035	14,282
Jul	972	-2	974	970	798	12,083
Sep	990	-	992	987	682	5,728
Dec	1004	+1	1006	1008	328	4,719
Total					7,785	139,675

■ COCOA CSCE (10 tonnes; $/tonnes)

	Sett price	Day's change	High	Low	Vol	Open int
Dec	1318	-7	1334	1316	8,882	18,375
Mar	1360	-5	1374	1358	7,977	27,182
May	1381	-5	1395	[illegible]	684	9,069
Jul	1396	-5	1412	1395	448	6,920
Sep	1416	-1	1430	1415	578	5,085
Dec	1437	-1	1446	1445	10	829
Total					18,697	77,146

■ COCOA (ICCO) (SDR's/tonne)

Nov 4	Price	Prev. day
Daily	998.62	1010.13

■ COFFEE LIFFE ($/tonne)

	Sett price	Day's change	High	Low	Vol	Open int
Nov	1501	-8	1520	1484	382	3,942
Jan	1401	+12	1402	1386	1,986	18,036
Mar	1346	+7	1346	1327	544	8,544
May	1326	+6	1333	1311	337	3,909
Jul	[illegible]	+6	1322	1316	29	526
Sep	[illegible]	+6	-	-	-	135
Total					3,238	33,122

■ COFFEE 'C' CSCE (37,500lbs; cents/lbs)

	Sett price	Day's change	High	Low	Vol	Open int
Dec	118.85	+1.10	119.00	116.80	2,443	10,363
Mar	107.90	+0.85	108.00	106.40	1,821	10,385
May	105.00	+0.80	105.00	103.50	313	3,895
Jul	103.00	-0.05	103.85	103.00	36	1,067
Sep	102.25	-0.25	103.00	102.30	13	[illegible]
Dec	102.00	-	[illegible]	102.00	5	409
Total					4,636	27,267

■ COFFEE (ICO) (US cents/pound)

[illegible]

■ WHITE SUGAR LIFFE ($/tonne)

[illegible]

■ SUGAR '11' CSCE (112,000lbs; cents/lbs)

[illegible]

■ COTTON NYCE (50,000lbs; cents/lbs)

[illegible]

■ ORANGE JUICE NYCE (15,000lbs; cents/lbs)

[illegible]

MEAT AND LIVESTOCK

■ LIVE CATTLE CME (40,000lbs; cents/lbs)

	Sett Price	Day's change	High	Low	Vol	Open int
Dec	67.025	-0.200	67.425	66.800	5,048	36,506
Feb	63.975	+0.025	64.250	63.700	1,350	19,467
Apr	66.000	+0.125	66.125	65.750	1,326	12,912
Jun	63.725	+0.025	63.975	63.525	1,067	5,119
Aug	63.000	-	63.250	62.925	395	5,417
Oct	65.725	+0.075	65.800	65.600	24	3,769
Total					9,961	84,476

■ LIVE HOGS CME (40,000lbs; cents/lbs)

	Sett Price	Day's change	High	Low	Vol	Open int
Dec	56.200	+0.250	56.450	55.500	5,713	12,618
Feb	76.100	+0.150	76.250	75.300	2,720	8,674
Apr	71.025	-0.125	71.350	70.750	302	3,045
Jun	[illegible]	+0.125	75.800	75.100	440	3,329
Jul	73.250	+0.050	73.400	73.000	53	867
Aug	69.700	+0.300	69.750	69.300	90	976
Total					9,324	30,099

■ PORK BELLIES CME (40,000lbs; cents/lbs)

	Sett Price	Day's change	High	Low	Vol	Open int
Feb	69.400	-0.075	69.900	68.475	1,533	4,940
Mar	69.600	+0.250	69.600	68.500	141	515
May	70.975	-0.125	71.150	70.600	129	383
Jul	71.200	+0.150	70.700	69.900	40	281
Aug	69.950	-	70.000	69.700	1	47
Total					1,844	6,116

LONDON TRADED OPTIONS

Strike price $ tonne — Calls — — Puts —

■ ALUMINIUM

(99.7%) LME	Dec	Mar	Dec	Mar
1375	61	105	18	38
1400	46	90	28	46
1425	33	76	40	57

■ COPPER

(Grade A) LME	Dec	Mar	Dec	Mar
1950	66	109	45	117
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

■ COFFEE LIFFE

[illegible]

■ COCOA LIFFE

[illegible]

■ BRENT CRUDE

[illegible]

LONDON SPOT MARKETS

■ CRUDE OIL FOB (per barrel)

[illegible]

■ OIL PRODUCTS NWE prompt delivery CIF (tonne)

[illegible]

■ NATURAL GAS (Pence/therm)

[illegible]

■ OTHER

[illegible]

FUTURES DATA
All futures data supplied by CMS.

[illegible]

VOLUME DATA

[illegible]

INDICES

■ Reuters (Base: 18/9/31 = 100)

[illegible]

■ CRB Futures (Base: 1967 = 100)

[illegible]

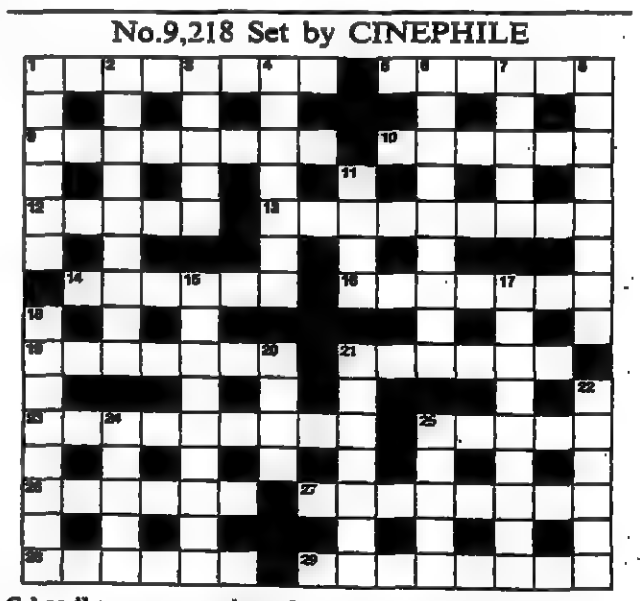
■ GSCI Spot (Base: 1970 = 100)

[illegible]

JOTTER PAD

CROSSWORD

No.9,218 Set by CINEPHILE



G has the same meaning wherever it occurs in the clues

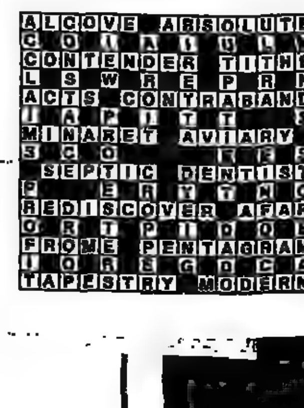
ACROSS

1 G emperor, one extreme in his refusal (8)
5 Plate gets chucked around for protection (6)
9 Soaking mixture produced without effect of rain (8)
10 Chessman taking another before dark (6)
12 Hero of railway police? (2,3)
13 Changes are at odds with anchorage (9)
14 Beardsley's biographer, G by re-formation (6)
16 The coin is for a saint (7)
19 Come back from space into the terrene? (2-5)
21 G coat stolen by sailors to escape going to church (6)
23 G rings round heads where things are stored 'iggledy-piggledy, we 'ear (9)
25 Part of plough, G for retaining government control (5)
26 At last setter's got some salad (6)
27 Terror long ago caused by a quarrel about French leaders (8)
28 Drink making one go wrong and timid about it (6)
29 Footwear for people who make mistakes? (8)

DOWN

1 Anaesthetic, if G used in relation to phases of the moon (6)
2 Safety device to beat up car, G in case of takeover (9)
3 Wrinkly but easier to write straight on? (5)
4 Hospital worker in neat style (7)
6 Leaving present, if G, for workers with fish (9)
7 G bird decapitated hound (5)
8 Did a task needed to store information (4,4)
11 G object of worship could be binding (4)
15 G dog making a recovery? (9)
17 Bird, uncertain in age, in land of leisure and luxury (9)
18 Go forward or go back, right into the crowd (8)
20 Draw a line in principle, maybe G (4)
21 A clutch, perhaps, awfully stiff before mid-July (7)
22 Truly ancient goddess keeping time briefly (6)
24 Something G to see resurrected before decease (5)
25 Railway's climbing heavenward to find G treacle (5)

Solution 9,218



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OFFSHORE AND OVERSEAS

BERMUDA (SIB RECOGNISED)

Fidelity Currency Funds Ltd
Pembroke Hall, Pembroke, Bermuda
UK Prof Advisers 0800 414181
Private Clients 0800 414181
From O'seas (44) 1732 777377
Jersey: 01534 71696
00 352 250404230
Hong Kong (852) 848 1000

	Selling Price	+ or -	Yield Gr's
A$ Accum	A$19.177	+0.003	5.80
ASch Accum	Sch249.11	+0.02	2.80
C$ Accum	C$18.719	+0.001	2.40
DM Accum	DM30.540	+0.002	1.30
DFl Accum	DFl51.882	+0.002	1.70
ECU Accum	Ecu13.510	+0.002	3.00
FFr Accum	FFr67.095	+0.004	2.30
HK$ Accum	HK$121.47	+0.01	4.20
Lire Accum	L23680	+5	7.20
NZ$ Accum	NZ$40.041	+0.009	8.80
Nkr Accum	NKr112.67	+0.01	3.60
S$ Accum	S$28.088	+0.002	2.80
SPta Accum	Pta2742.2	+0.4	5.90
£ Accum	£13.132	+0.002	4.20
SKr Accum	SKr121.29	+0.01	3.80
SFr Accum	SFr28.285	—	0.80
US$ Accum	$23.364	+0.002	4.40
Yen Accum	Y2080.5	—	0.10

Prices for dealing November 5

[illegible]

BERMUDA (REGULATED)(**)

[illegible]

QUERNSEY (SIB RECOGNISED)

[illegible]

GUERNSEY (REGULATED)(**)

[illegible]

IRELAND (SIB RECOGNISED)

[illegible]

IRELAND (REGULATED)(**)

[illegible]

ISLE OF MAN (SIB RECOGNISED)

[illegible]

ISLE OF MAN (REGULATED)(**)

[illegible]

JERSEY (SIB RECOGNISED)

[illegible]

JERSEY (REGULATED)(**)

[illegible]

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LUXEMBOURG (SIB RECOGNISED)

	Init Chrge	Notes	Selling Price	Buying Price	+ or -	Yield Gr's
ABN AMRO Funds (u)						
4 Rue Jean Monet, L-2180 Luxembourg 352 42494I6020						
Latin America Equity			$47.94	48.66	--	-
North America Equity			$78.47	78.87	--	-
Asian Tigers Equity			$81.15	81.78	--	-
Europe Equity			$72.80	72.90	--	-
Germany Equity			DM131.27	131.88	--	-
Japan Equity			$47.10	47.60	--	-
Europe Bond			$80.87	81.02	--	-
US Bond			$58.15	58.30	--	-
Global Bond			$61.04	61.19	--	-
Germany Bond B			DM108.31	108.01	--	-
Spain Bond			Pts9930	9955	--	-
Eastern Europe Equity F			DM177.58	177.84	--	-
China Equity F			$58.18	58.80	--	-
Switzerland Equity			SFr121.89	122.43	--	-
Abtrust Fund Mngrs Luxembourg SA (u)						
4 Boulevard Royal L 2449 Luxembourg 00 352 227001						
Abtrust Atlas Fund						
Global Cap Portfolio			$3.739		+0.019	-
United States Portfolio			$5.4149		+0.025	-
Conti Europe Portfolio		D	DM8.270		+0.035	-
Japan Portfolio			£0.503		-0.006	-
Pacific Portfolio			$0.500		-0.008	-
Gold Portfolio			$6.220		+0.021	-
UK Growth of Income			£2.0849		-0.011	3.01
Dollar Portfolio			$1.8559		--	7.02
Sterling Portfolio			£1.0814		--	6.30
Aetna Master Fund (u) (x)						
21 avenue de la Liberte, L-1931, Lux 00 352 479 98900						
Australasian NAV			A$17.13		+0.08	-
Austrian Nat NAV			Sch84.15		-0.01	-
Belgo/Lux NAV			BFr765.10		+2.13	-
Dutch Nat NAV			Dfl30.60		-0.08	-
French Nat NAV			FFr132.40		+0.20	-
German Nat NAV			DM17.67		-0.05	-
Hongkong Nat NAV			HK$127.13		+0.43	-
Italian Nat NAV			L11540		+21	-
Japanese Nat NAV			Y1257		--	-
Spanish Nat NAV			Pts1246		+4	-
UK Nat NAV			£10.73		-0.08	-
United States Dlr Res.			$11.02		--	-
Prices quoted are "A" shares						
American Phoenix Investment Portfolios (u)						
13 rue Goethe, L-1637 Luxembourg 00 352 404646211						
European Multinational Ptfl			Ecu18.58		+0.12	-

	Init Chrge	Notes	Selling Price	Buying Price	+ or -	Yield Gr's
Fidelity Funds - Contd.						
Italy			L13934		-2	-
Japan Small Cos			Y1040		-1	-
Korea F		D	$3.094		-0.270	-
Latin America			$8.365		+0.049	0.35
Malaysia			$30.94		+0.24	-
Nordic			SKr183.4		+0.3	-
Singapore			$73.82		-0.01	-
Switzerland			SFr14.87		--	-
Thailand			$26.56		-0.16	-
United Kingdom			£1.131		-0.001	-
Bond Funds						
European			Ecu11.12		--	0.40
International			$1.057		-0.001	5.28
US Dollar			$5.401		+0.005	5.72
Sterling			£0.249		-0.001	6.26
Yen			Y1000		--	2.49
Balanced						
European Balanced			DM12.51		-0.01	1.52
Prices as at November 4						
Fleming Group (u)						
6 Route De Treves L-2633 Senningerberg Luxembourg						
00 352 34101 or 0800 660 294						
Internet: http://www.flemings.lu/						
Fleming Flagship Fund (daily dealing)						
FFF American			$51.86	54.65	--	-
FFF Amer Fledgling F			$61.80	65.48	+0.01	-
FFF Asian Smaller Cos F			$10.37	10.97	+0.09	-
FFF China			$12.22	12.93	+0.01	-
FFF Continental Europe F			DM35.54	37.50	+0.13	-
FFF DM Balanced F		5	DM10.78	11.40	-0.03	-
FFF DM Bond		3	DM11.15	11.66	-0.02	6.50
FFF Eastern European F			DM21.88	23.14	-0.06	-
FFF Eastern Opps			$21.22	22.48	+0.01	-
FFF Emerging Markets F			$9.08	9.58	--	-
FFF European			DM35.80	37.87	+0.14	-
FFF European Small Cos F			DM21.86	23.12	+0.01	-
FFF Global Clubs F			$17.28	18.29	+0.01	-
FFF India H			$8.29	8.77	-0.02	-
FFF Intl Bond F			$14.61	15.46	+0.07	-
FFF Intl Equity F			DM69.24	73.25	+0.16	-
FFF Japanese			$17.45	18.48	-0.12	-
FFF Japanese Smaller Cos F			$7.57	8.00	-0.05	-
FFF Latin American			$11.21	11.88	+0.02	-
FFF Pacific			$19.53	20.66	-0.03	-
FFF Sterling Bond			£1.089	1.131	-0.002	7.50
FFF UK Enterprise			£5.16	5.45	-0.02	-
FFF US Discovery			$41.34	43.52	-0.11	-
Fleming Flagship Series II (Daily Dealing)						
DM Class			DM12.311		--	2.98
FFr Class			FFr63.548		+0.005	2.81

LUXEMBOURG (REGULATED)(**)

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OTHER OFFSHORE FUNDS

LONDON SHARE SERVICE

ALCOHOLIC BEVERAGES

BANKS, MERCHANT

BANKS, RETAIL

BREWERIES, PUBS & REST

BUILDING & CONSTRUCTION

BUILDING MATS. & MERCHANTS

CHEMICALS

CHEMICALS - Cont.

DISTRIBUTORS

DIVERSIFIED INDUSTRIALS

ELECTRICITY

ELECTRONIC & ELECTRICAL EQPT

ELECTRONIC & ELECTRICAL EQPT - Cont.

ENGINEERING

ENGINEERING - Cont.

ENGINEERING, VEHICLES

EXTRACTIVE INDUSTRIES

EXTRACTIVE INDUSTRIES - Cont.

FOOD PRODUCERS

FOOD PRODUCERS - Cont.

GAS DISTRIBUTION

HEALTH CARE

HOUSEHOLD GOODS

HOUSEHOLD GOODS - Cont.

INSURANCE

INVESTMENT TRUSTS

INVESTMENT TRUSTS - Cont.

INV TRUSTS SPLIT CAPITAL

LONDON SHARE SERVICE

INV TRUSTS SPLIT CAPITAL - Cont.

[illegible]

OTHER INVESTMENT TRUSTS

[illegible]

INVESTMENT COMPANIES

[illegible]

LEISURE & HOTELS

[illegible]

LEISURE & HOTELS - Cont.

[illegible]

LIFE ASSURANCE

[illegible]

MEDIA

[illegible]

OIL EXPLORATION & PRODUCTION

[illegible]

OIL, INTEGRATED

[illegible]

OTHER FINANCIAL

[illegible]

PAPER, PACKAGING & PRINTING

[illegible]

PAPER, PACKAGING & PRINTING - Cont.

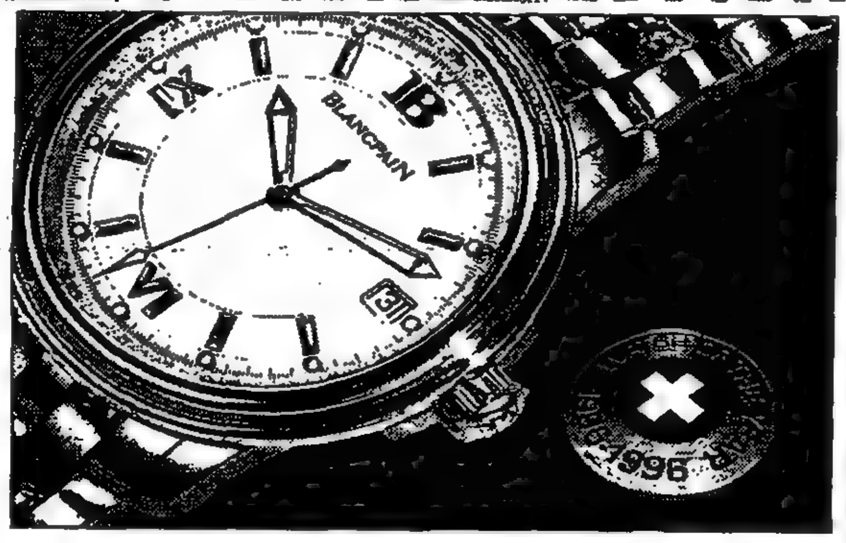
[illegible]

PHARMACEUTICALS

[illegible]

PROPERTY

[illegible]



PROPERTY - Cont.

[illegible]

RETAILERS, FOOD

[illegible]

RETAILERS, FOOD - Cont.

[illegible]

RETAILERS, GENERAL

[illegible]

SUPPORT SERVICES

[illegible]

SUPPORT SERVICES - Cont.

[illegible]

TELECOMMUNICATIONS

[illegible]

TELECOMMUNICATIONS - Cont.

[illegible]

TEXTILES & APPAREL

[illegible]

TOBACCO

[illegible]

TRANSPORT

[illegible]

WATER

[illegible]

AIM

[illegible]

AIM - Cont.

[illegible]

AMERICANS

[illegible]

CANADIANS

[illegible]

SOUTH AFRICANS

[illegible]

GUIDE TO LONDON SHARE SERVICE

Prices for the London Share Service delivered by Extel, part of Financial Times Information.

Company classifications are based on those used for the FTSE Actuaries Share Indices.

Closing mid-prices are shown in pence unless otherwise stated. Highs and lows are based on intra-day mid-prices over a rolling 52 week period.

Where stocks are denominated in currencies other than sterling, this is indicated after the name.

Symbols referring to dividend status appear in the notes column daily as a guide to yields and P/E ratios. Dividends and Dividend covers are published on Monday.

Market capitalisation shown is calculated separately for each line of stock quoted.

Earnings used in calculations are based on 'Net' Yestline Earnings/Forecasts.

Price/earnings ratios are based on latest annual reports and accounts and, where possible, are updated on interim figures.

Yields are based on mid-prices, are gross, adjusted for a dividend tax credit of 20 per cent and allow for value of declared distribution and rights.

Estimated Net Asset Values (NAVs) are shown for Investment Trusts, in pence per share, along with the percentage discounts (Dis) or premiums (Pm -) to the current closing share price. The NAV basis assumes prior charges at par value, convertibles converted and warrants exercised if dilution occurs.

- * Highs and lows marked thus have been adjusted to allow for capital changes
- † Interim since increased or resumed
- ‡ Interim since reduced, passed or deferred
- Figures or report awaited
- Rule 2.1(a)(iv) Overseas incorporated companies listed on an approved exchange.
- Free annual/interim report available, see details below.
- USM; not listed on Stock Exchange and company not subjected to same degree of regulation as listed securities.
- ‡‡ Rule 4.2(a) Irish incorporated non-listed companies.
- Price at time of suspension
- Indicated dividend yield after pending scrip and/or rights issue
- ◆ Merger bid or reorganisation in progress
- Forecast dividend yield; p/e based on earnings updated by latest interim statement.
- ♣ Unregulated collective investment scheme.

a Yield based on annualised dividend
b Figures based on prospectus or other official estimates.
g Assumed dividend yield after rights issue.
h Assumed dividend yield after scrip issue.
n Rights issue pending
q Earnings based on preliminary figures.
s Dividend yield excludes a special payment.
t Indicated dividend yield, p/e ratio based on latest annual earnings
u Forecast, or estimated annualised dividend yield, p/e based on previous year's earnings
z Dividend yield includes a special payment

F Yield based on prospectus or other official estimates for 1996-97.
G Assumed yield after pending scrip and/or rights issue.
H Yield based on prospectus or other official estimates for 1995.
K Yield based on prospectus or other official estimates for 1996
L Estimated annualised yield, p/e based on latest annual earnings.
M Yield based on prospectus or other official estimates for 1995-96.
N Dividend is paid in whole or part as a

FD (Foreign Income Dividend)
R Forecast annualised yield, p/e based on prospectus or other official estimates.
W Pro forma figures.
Z Dividend yield to date.

Abbreviations:
xd ex dividend;
xc ex scrip issue;
xr ex rights;
xa ex all;
xf ex capital distribution.

This service is available to companies whose shares are regularly traded in the United Kingdom for a fee of £1350 a year for each security shown, subject to the Editor's discretion

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The share prices printed on these pages are also available on the internet at http://www.FT.com.

LONDON STOCK EXCHANGE

Gilts to equity switch restrains UK shares

MARKET REPORT

By Steve Thompson, UK Stock Market Editor

Talk of a series of switching operations, involving institutions shifting funds from UK equities into gilts, plus a continuation of sterling's recent strength, kept the pressure on London stocks yesterday.

Rumours of a switch between the two markets was highlighted by signs of heavy business in index options. Gilts reaped the benefit with the 10-year and 20-year issues around 22-24 ticks ahead near the close.

The FTSE 100 index, which has had to cope with flurries of selling pressure since last week's surprise UK interest rate rise, endured another buffeting yesterday, closing 7.0 off at 3,921.1.

But there were other potent reasons behind equities' poor showing yesterday. Sterling's strength against leading currencies was said to have affected the big international stocks and dealers continued to worry about the possibility of further increases in base rates in the run-up to the general election.

The US election, being held yesterday, was another factor said to have troubled European markets at the outset, with some bears adopting the view that a landslide victory by President Bill Clinton and Congressional Democrats could result in a vigorous spending programme.

Also worrying traders was the sell-off in the second-liners and small cap stocks yesterday. The FTSE 250 underperformed the leaders, sliding 13.2 to 4,405.2, while the Small Cap index retreated 3.1 to 2,160.9.

There was more bad news with disappointing figures from Marks & Spencer, the UK's leading retailer. M&S shares, heavily weighted in the FTSE 100 index, dropped more than 5 per cent, causing considerable damage to sentiment in the consumer sectors.

Footsie kicked off the session on the back foot, slipping some 7 points shortly after the opening, and fell further during the morning, with the index down just over 17 points at worst.

The midday release of BP's third-quarter numbers gave a boost, and Footsie embarked on a gradual rally which took it back to almost level before it fell away again.

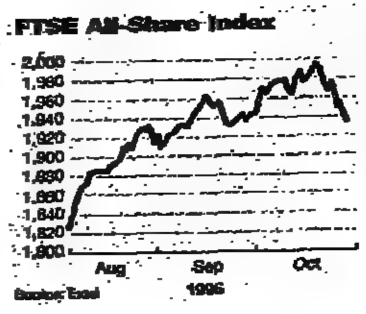
Wall Street's strong rise early yesterday helped London stocks regain some confidence. The Dow Jones Industrial Average was up over 40 points not long after the US market opened.

Marketmakers said the emergence of a series of medium-sized programme trades indicated that much of the sell-side activity by institutions had been completed, although some adopted the view that the potential for further increases in UK interest rates would result in further falls.

Others, however, pointed to Wall Street's rally and said the growing feeling was that the next meeting of the Federal Reserve's monetary policy-making committee, starting on November 13, would see the US authorities hold the line on interest rates.

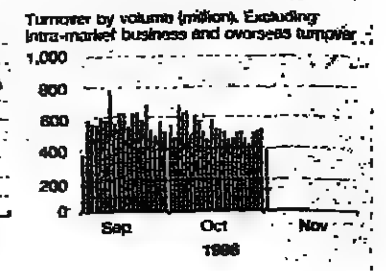
Turnover at the 6pm count was 781.9m and split evenly between leaders and second-liners. Customer business on Monday was a lowly £1bn.

FTSE All-Share Index



Equity shares traded

Turnover by volume (million). Excluding intra-market business and overseas turnover



Indices and ratios

FTSE 100	3921.1	–7.0	FT 30	2781.0	–1.9
FTSE 250	4405.2	–13.2	FTSE Non-Fins p/e	17.66	17.89
FTSE 350	1958.4	–4.0	FTSE 100 Fut Dec	3931.0	–17.0
FTSE All-Share	1934.2	–3.87	10 yr Gilt yield	7.78	7.76
FTSE All-Share yield	3.84	3.83	Long gilt/equity yld ratio	2.06	2.09

Best performing sectors

1. Electricity .... +1.3
2. Transport .... +0.7
3. Breweries: Pubs & Rest .... +0.5
4. Health Care .... +0.5
5. Insurance .... +0.5

Worst performing sectors

1. Retailers: General .... –1.4
2. Engineering .... –1.0
3. Media .... –0.8
4. Extractive Industries .... –0.8
5. Distributors .... –0.7

Active trading in BSkyB

By Peter John, Lisa Wood and Joel Kibazo

BSkyB was under pressure despite support from the stabilisation process following News Corp's $1bn preference share issue.

The issue of special preference shares by Mr Rupert Murdoch's media empire, which will be exchangeable into BSkyB stock, is being handled by Merrill Lynch.

The exercise price of the warrants represented a 20 per cent premium to the price of BSkyB shares in London before the warrants began trading yesterday and Merrill can buy BSkyB shares to stabilise the price for 30 days.

In early trading, the shares were up 14, but broker buying was undermined by a sell note from Lehman Brothers. Lehman began coverage of the satellite broadcaster with a valuation of only 481p a share. It believes the increased cost of buying programmes, as well as more government regulation to ensure increased competition, could undermine profits.

Despite a big fall on Monday, BSkyB failed to recover and ended the day only 1½ firmer at 548½p with the two-way pull on the stock ensuring very heavy volume of nearly 30m shares.

Relief mingled with enthusiasm to help BP remain in positive territory following the announcement of its third-quarter figures.

The market had been bracing itself for bad news following last week's disappointing figures from Shell. The nervousness was increased by the recent jump in sterling – hitting the profits of big dollar earners – and the recent correction in underlying oil price.

As it was, both the underlying profits were at the top end of the range of analysts' forecasts and the figures from the refining and marketing side were particularly encouraging.

Analyst Mr Steve Turner of HSBC James Capel commented: "There is no great ammunition for the bears in these figures. If it were not for the oil price and sterling the shares would have performed better." BP rose 2 to 640¼p while Shell Transport fell 7 to 958½p.

Marks & Spencer fell 26 to 483p after first-half results showing profits growth of 11.6 per cent. This disappointed the market which had forecast up to a 20 per cent increase in profits – an expectation which Sir Richard Greenbury described as "naive".

One analyst said the results were good but dull, with M&S a low-risk stock providing average reward. Several analysts downgraded forecasts for the stock, which is on a premium rating. ABN-Amro Hoare Govett trimmed its full-year estimate from £1.16bn to £1.11bn with the stock a "weak hold". UBS took £40m off its forecast to £1.12bn while retaining its positive view on the stock.

Lloyds Chemists fell 5½ to 511p after the market was disappointed by the price at which Gehe, the German pharmaceuticals distributor, launched a bid. Unichem has already made an offer for the chemist chain. The Gehe bid, while topping Unichem's cash and share offer, was not as high as expected.

Dixons hardened 5 to 549p after NatWest Securities upgraded its forecast for the year ended April 1977 from £180m to£195m and from £210m to £225m for the following year. Most forecasts for the current year have been between £180m and £190m.

UK generators, National Power and PowerGen were squeezed higher on stock shortages after the recent UBS recommendation, which focused attention on safe high-yield stocks at a time of uncertainty.

There was also vague bid speculation in the sector, following mutterings of a possible bid from Shell. National Power lifted 16 to 417½p and PowerGen 13¼ to 534p.

Lloyds TSB was weak, as one broker apparently went round offering 6m shares at 383p a share. With half the deal carried out just before the close, the shares were off 3½ at 383p.

Bank of Scotland dipped 1½ to 277p, although further falls were stemmed by Goldman Sachs which included the stock in its European banking portfolio.

Mercury Asset Management fell 20 to 1122½p despite a 28.6 per cent leap in profits. The shares outperformed the FTSE All-Share index by 20 per cent over the past 12 months.

Better than expected interim results initially lifted Whitbread a few pence, but the shares then fell back 4 to 736½p on trade of 5.5m shares, an unusually high volume for the stock.

Analysts said there had been some switching into other stocks, particularly Greenalls, which rose 17¼ to 588½p, with SGST recommending the stock as a "buy". Scottish & Newcastle, which hardened 5½ to 648½p, was also said to be a beneficiary of some switching from Whitbread.

First Leisure fell 9 to 360½p after a disappointing trading statement, with market conditions for bingo said to be depressed. Ladbroke, which also has substantial interests in bingo, fell 3¼ to 194½p in sympathy. Diversified industrials company Cookson Group gave up 8 to 217½p after trade of 5.2m, after Crédit Lyonnais Laing weighed in with a sharp profits downgrade.

Crédit Lyonnais cut its current year profits forecast by £23m to £170m and reduced the following year's figures by £36m to £189m. Explaining the move, Mr Ian Rennardson at Crédit Lyonnais said: "The electronic materials division – responsible for a third of profits – is showing no signs of improving this year and signs for 1997 are not very positive so far."

In the rest of the sector, Tomkins were wanted and the shares hardened 3½ to 255p on volume of 7.7m.

BTR added 5 to 255p. Albert E Sharp favours the stock and suggested investors should "buy for growth potential".

British Airways was one of the day's best performers. The shares jumped 18½ to 568p after posting interim figures at the top end of market expectations.

Sentiment in the stock was boosted by expectations that the carrier's tie-up with American Airlines will soon receive approval.

Bid speculation continued in Vodafone Group. The shares gained another 4½ to 246p, in heavy trading of 13m, with AT&T of the US still thought to be the most likely predator.

Fairway, the printing services group, fell 28¼ to 81½p following a profit warning.

More Group dropped 13½ to 684p as the billboard and bus shelter advertiser announced a one-for-four rights issue at 600p a share to part-fund the £78.1m acquisition of Wennergren Williams, the Swedish outdoor advertiser.

FT 30 INDEX

	Nov 5	Nov 4	Nov 1	Oct 31	Oct 30	Yr ago	*High	*Low
FT 30	2781.0	2782.9	2795.0	2810.9	2799.1	2578.6	2885.2	2688.8
Ord. div. yield	4.11	4.10	4.08	4.06	4.07	4.12	4.22	3.76
P/E ratio net	16.80	16.80	16.91	16.99	16.95	15.54	17.46	15.80
P/E ratio nil	16.64	16.65	16.75	16.83	16.79	15.36	17.30	15.71

FT 30 since compilation: high 2885.2 19/04/96; low 49.4 26/06/40. Base Date: 1/7/35.

FT 30 hourly changes

Open	9.00	10.00	11.00	12.00	13.00	14.00	15.00	16.00	High	Low
2779.9	2781.0	2774.5	2772.8	2776.8	2777.2	2782.3	2781.7	2779.4	2786.3	2772.8

	Nov 5	Nov 4	Nov 1	Oct 31	Oct 30	Yr ago
SEAQ bargains	37,653	39,380	36,536	35,647	36,098	28,199
Equity turnover (£m)†	–	1001.4	907.9	1246.0	1335.8	1808.8
Equity bargains†	–	25,803	23,400	26,174	27,247	33,086
Shares traded (ml)†	–	359.7	386.1	526.4	515.8	639.0

†Excluding intra-market business and overseas turnover.

	Nov 5	Nov 4	Nov 1	Oct 31	Oct 30	Yr ago	*High	*Low
FTSE AIM	1029.50	1028.70	1025.40	1025.00	1022.20	–	1149.40	986.70

London market data

Rises and falls*		52 Week highs and lows		LIFFE Equity options	
Total Rises	514	Total Highs	54	Total contracts	141,036
Total Falls	723	Total Lows	132	Calls	58,580
Same	1,351			Puts	82,456

Nov 5 *Data based on Equity shares listed on the London Share Service.

FUTURES AND OPTIONS

■ FTSE 100 INDEX FUTURES (LIFFE) £25 per full index point (APT)

	Open	Sett price	Change	High	Low	Est. vol	Open int
Dec	3946.0	3928.5	-21.5	3953.0	3920.0	24295	60666
Mar	3942.0	3941.5	-21.5	3955.0	3942.0	761	945
Jun	[illegible]	3953.0	-25.0	3953.5	3953.5	50	1374

■ FTSE 250 INDEX FUTURES (LIFFE) £10 per full index point

	Open	Sett price	Change	High	Low	Est. vol	Open int
Dec		4430.0	-13.0			0	4129

■ FTSE 100 INDEX OPTION (LIFFE) (*3918) £10 per full index point

Calls 44,062 Puts 30,984

■ EURO STYLE FTSE 100 INDEX OPTION (LIFFE) £10 per full index point

Calls 6,310 Puts 15,634 * Underlying index value. Premiums shown are based on settlement prices. † Long dated expiry months.

LONDON RECENT ISSUES: EQUITIES

Issue price p	Amt paid up	Mkt. cap (£m.)	1996 High	1996 Low	Stock	Close price p	+/-	Net div.	Div. cov.	Grs yld	P/E net
§3	F.P.	7.55	4¼	4	†Beechcroft	4		–	–	–	[illegible]
§135	F.P.	47.7	164½	152½	Charles Taylor	163½	+1	L4.2	[illegible]	3.2	52.0
3	F.P.	7.02	4½	4	†Corp Exec Search	4½		–	–	–	–
	F.P.	10.2	162½	156½	†Deep Sea Leisure	162½		–	–	–	–
§90	F.P.	24.9	92½	90½	†Fitness First	90½		bW-	–	–	28.3
100	F.P.	98.5	113½	81½	†Geo Inter Med	85½	+6	–	–	–	–
§100	F.P.	24.9	99½	99	Hlthcare Reform	99½		–	–	–	–
§	F.P.	54.2	177	162½	Interoute Telecom	162½	–1	–	–	–	–
	F.P.	11.0	132½	124½	†Jardinane Inte	125		–	–	–	–
§285	F.P.	140.2	310	282½	John D Sports	301½	+½	[illegible]	2.5	1.8	28.4
72	F.P.	27.8	79½	78½	†Lotus Road	78		–	–	–	–
*	F.P.	45.1	131½	128	Lomond Undrwrtng	130½	+½	–	–	–	–
§10	F.P.	4.23	12¼	11¼	†Mears Group	11¾		K0.2	–	2.1	–
75	F.P.	5.46	93½	82½	†Mondas	90½	–2	–	–	–	–
§154	F.P.	19.8	211½	187½	Oriental Rest	207½	+1	–	–	–	23.5
170	F.P.	989.7	177	160½	Thistle Hotels	161	–3½	R3.7	2.5	2.9	17.3
§250	F.P.	190.1	302	282½	Ultra Elctn	292½	–2	RW6.5	2.3	2.8	19.8
§	F.P.	99.5	62	52	†Victory Corp	52½		–	–	–	–

† Alternative Investment Market. § Placing price. * Introduction. For a full explanation of all other symbols please refer to The London Share Service notes.

FT GOLD MINES INDEX

	Nov 4	% chg on day	Nov 1	Year ago	Gross div yield %	P/E ratio	52 week High	52 week Low
Gold Mines Index (31)	1982.70	+0.5	1973.42	1772.23	1.88	–	2526.73	1772.23
■ Regional Indices								
Africa (13)	2482.67	+0.3	2475.26	2333.66	[illegible]	38.23	[illegible]	[illegible]
Australasia (6)	2089.93	+1.3	2063.53	2174.34	[illegible]	20.95	2927.34	2005.75
North America (12)	1587.13	+0.4	1579.59	1557.66	[illegible]	63.82	2186.39	1557.66

Figures in brackets show number of companies. Base US Dollars. Base Value: 1000.00 31/12/92. † Partial. Latest prices were unavailable for this edition.

FTSE Actuaries Share Indices — The UK Series

Produced in conjunction with the Faculty and Institute of Actuaries

	Nov 5	Day's chge%	Nov 4	Nov 1	Oct 31	Year ago	Div. yield%	Net cover	P/E ratio	Xd adj. ytd	Total Return
FTSE 100	3921.1	–0.2	3928.1	3948.5	3979.1	3822.4	4.00	2.08	15.21	153.51	1632.13
FTSE 250	4405.2	–0.3	4418.4	4429.2	4422.5	3893.8	3.55	1.49	23.60	158.86	1796.81
FTSE 250 ex IT	4447.4	–0.3	4460.6	4471.2	4463.5	3914.4	3.64	1.52	22.62	167.83	1817.78
FTSE 350	1958.4	–0.2	1962.4	1971.4	1982.7	1753.3	3.90	[illegible]	16.48	75.50	1665.47
FTSE 350 Higher Yield	1867.3	+0.1	1868.3	1869.8	1882.5	1753.3	5.19	1.63	13.18	97.33	1339.65
FTSE 350 Lower Yield	2056.6	–0.4	2065.6	2080.3	2090.1	1757.7	2.74	2.15	21.27	54.22	1438.69
FTSE SmallCap	2180.90	–0.1	2184.09	2187.41	2187.99	1938.28	3.15	1.58	25.15	61.51	1797.84
FTSE SmallCap ex IT	2165.25	–0.1	2167.53	2170.08	2170.56	1921.35	3.34	[illegible]	22.69	65.33	1814.34
FTSE All-Share	1934.20	–0.2	1938.07	1946.55	1956.90	1731.45	3.84	1.92	16.93	73.08	1669.92

■ FTSE Actuaries Industry Sectors

	Nov 5	Day's chge%	Nov 4	Nov 1	Oct 31	Year ago	Div. yield%	Net cover	P/E ratio	Xd adj. ytd	Total Return
10 MINERAL EXTRACTION(24)	3709.09	–0.3	3720.39	3765.40	3846.64	2883.98	3.85	1.71	19.01	128.06	1619.32
12 Extractive Industries(6)	4126.40	–0.8	4158.89	4209.01	4241.19	4133.91	3.99	2.66	11.96	162.00	1229.87
15 Oil, Integrated(3)	3812.81	–0.2	3820.04	3870.03	3985.71	2864.12	4.05	1.56	19.88	135.18	1708.67
16 Oil Exploration & Prod(15)	2783.82	–0.6	2800.63	2809.59	2867.42	1865.84	1.91	1.71	38.43	52.04	1686.68
20 GEN INDUSTRIALS(279)	2019.05	–0.3	2025.34	2037.25	2050.19	1930.87	4.16	1.74	17.25	76.28	1124.70
21 Building & Construction(34)	1184.74	+0.3	1181.62	1186.34	1187.60	997.14	3.57	1.46	23.84	38.99	1009.04
22 Building Matls & Merchs(29)	1885.89	+0.1	1883.89	1904.89	1920.46	1664.93	4.09	1.41	21.70	72.84	971.99
23 Chemicals(25)	2404.78	–0.4	2413.70	2427.23	2441.06	2400.99	4.22	1.45	20.46	86.14	1159.20
24 Diversified Industrials(16)	1434.89	+0.3	1430.73	1444.80	1455.53	1756.82	7.06	1.61	10.99	89.36	827.23
25 Electronic & Elect Equip(36)	2317.57	–0.6	2332.67	2333.18	2338.28	2102.26	3.38	1.48	25.00	84.15	1222.22
26 Engineering(71)	2588.74	–1.0	2614.75	2627.87	2643.76	2119.58	3.16	2.47	16.04	72.59	1595.78
27 Engineering, Vehicles(14)	3214.22	+0.2	3208.08	3234.18	3239.18	2538.37	2.16	2.68	21.67	102.59	1696.32
28 Paper, Pckg & Printing(26)	2565.87	–0.2	2569.77	2567.49	2575.48	2870.21	4.06	1.82	16.91	92.21	1089.25
29 Textiles & Apparel(19)	1153.69	–0.5	1158.90	1166.48	1169.09	1452.76	6.19	1.16	17.35	52.22	718.05
30 CONSUMER GOODS(89)	3654.33	......	3654.68	3672.26	3690.34	3460.34	3.94	1.93	16.39	129.85	1375.80
32 Alcoholic Beverages(6)	2729.86	+0.2	2725.47	2727.14	2736.45	2824.43	4.65	1.63	16.52	104.19	1002.58
33 Food Producers(25)	2538.55	–0.3	2546.42	2547.50	2558.06	2444.08	4.17	1.86	16.19	88.34	1165.91
34 Household Goods(15)	2706.10	–0.7	2724.42	2724.72	2729.89	2554.66	3.78	2.25	14.73	100.09	1055.25
36 Health Care(18)	1965.87	+0.5	1955.93	1962.87	1962.90	1919.14	3.03	1.97	20.99	54.40	1212.12
37 Pharmaceuticals(14)	5858.87	+0.1	5855.36	5700.45	5721.31	4841.92	3.02	2.01	20.55	162.93	1952.20
38 Tobacco(2)	3514.36	......	3514.96	3538.35	3602.33	4514.98	7.38	2.13	7.96	262.07	905.01
40 SERVICES(254)	2560.45	–0.5	2572.67	2589.94	2595.97	2126.58	2.91	1.97	21.77	73.57	1351.76
41 Distributors(30)	2918.43	–0.7	2937.62	2934.95	2918.13	2612.73	2.92	2.02	21.14	79.68	1092.06
42 Leisure & Hotels(25)	3169.88	–0.3	3179.27	3193.53	3179.02	2472.13	2.78	2.03	22.35	173.08	1723.72
43 Media(45)	4258.96	–0.8	4293.43	4342.98	4372.15	3392.55	2.15	2.08	28.27	91.86	1558.88
44 Retailers, Food(15)	1999.98	+0.1	1997.06	2025.96	2034.67	1909.31	3.93	2.29	13.87	63.74	1283.29
45 Retailers, General(45)	2074.51	–1.4	2104.84	2120.46	2132.21	1749.02	3.12	2.09	19.19	63.83	1206.13
47 Breweries, Pubs & Rest.(21)	3167.93	+0.5	3151.10	3139.39	3135.78	2646.83	3.29	2.00	19.05	68.29	1536.12
48 Support Services(50)	2600.21	–0.4	2610.13	2604.45	2601.00	1830.16	1.88	2.26	29.37	47.97	1669.82
49 Transport(23)	2538.96	+0.7	2520.94	2537.96	2531.10	2217.88	3.75	1.18	28.32	82.36	1078.83
60 UTILITIES(33)	2361.94	+0.1	2359.07	2326.00	2330.98	2484.74	5.49	1.75	13.03	168.98	1056.52
62 Electricity(12)	2463.61	+1.3	2432.57	2431.48	2428.15	2846.93	6.68	2.21	8.45	429.17	1334.03
64 Gas Distribution(2)	1298.15	......	1298.15	1298.15	1298.15	1517.12	9.23	0.83	16.25	119.71	710.31
66 Telecommunications(8)	2043.41	–0.3	2049.99	1991.82	2003.25	2054.08	3.95	1.51	20.98	50.32	949.12
68 Water(11)	2151.28	–0.2	2156.59	2168.35	2161.71	2086.99	6.50	2.29	8.39	103.62	1221.63
69 NON-FINANCIALS(666)	2022.54	–0.2	2027.43	2035.74	2048.39	1830.69	3.86	1.84	17.66	77.81	1567.59
70 FINANCIALS(103)	3264.68	......	3264.65	3283.33	3290.89	2757.25	4.07	2.36	13.02	124.34	1437.74
71 Banks, Retail(9)	4695.15	–0.1	4702.09	4729.09	4744.83	3872.52	3.87	2.71	11.92	175.98	1569.94
72 Banks, Merchant(6)	3721.32	–0.3	3731.30	3718.53	3717.99	3596.79	2.80	2.81	15.91	95.60	1197.82
73 Insurance(21)	1545.34	+0.5	1538.98	1550.56	1551.38	1376.88	5.42	2.27	10.15	79.70	1197.24
74 Life Assurance(7)	3717.82	+0.3	3705.98	3743.05	3705.72	3262.60	4.18	1.78	16.75	151.01	1580.69
77 Other Financial(20)	2701.11	–0.3	2708.32	2713.13	2700.76	2397.27	4.05	1.79	17.28	88.27	1566.43
79 Property(41)	1646.92	+0.1	1645.45	1650.78	1648.42	1363.58	3.90	1.27	25.25	49.30	1031.33
80 INVESTMENT TRUSTS(127)	3118.71	–0.3	3128.67	3139.45	3143.22	2910.51	2.29	1.12	46.65	62.38	1100.78
89 FTSE All-Share(896)	1934.20	–0.2	1938.07	1946.55	1956.90	1731.45	3.84	1.92	16.93	73.08	1669.92
FTSE Fledgling	1222.05	–0.2	1224.47	1227.88	1227.15	1080.03	2.81	0.65	68.27	31.08	1295.24
FTSE Fledgling ex IT	1236.31	–0.2	1238.61	1242.44	1241.26	1080.89	3.00	0.57	72.98	33.89	1312.11

■ Hourly movements

	Open	9.00	10.00	11.00	12.00	13.00	14.00	15.00	16.10	High/day	Low/day
FTSE 100	3921.0	3924.4	3915.6	3911.1	3917.0	3918.5	3926.1	3926.5	3918.7	3930.4	3911.0
FTSE 250	4413.8	4413.5	4408.6	4407.8	4406.5	4405.7	4408.5	4407.7	4404.7	4414.7	4404.4
FTSE 350	1958.2	1960.5	1956.6	1954.7	1956.9	1957.6	1960.5	1960.5	1957.4	[illegible]	1954.7

Time of FTSE 100 Day's high: 8:52 AM Day's low: 11:04 AM. FTSE 100 1996 High: 4073.1 (21/10/96) Low: 3632.3 (16/07/96).

■ FTSE 350 Industry baskets

	Open	9.00	10.00	11.00	12.00	13.00	14.00	15.00	16.10	Close	Previous	Change
Bldg & Cnstrcn	1154.3	1154.9	1155.3	1156.1	1156.5	1156.9	1156.3	1155.8	1155.9	1156.2	1152.1	+4.1
Pharmaceuticals	5588.6	5580.9	5577.4	5554.2	5561.6	5565.2	5570.2	5569.9	5574.6	5585.7	5582.6	+3.1
Water	2137.0	2138.5	2134.0	2132.3	2132.2	2130.1	2133.4	2135.0	2133.2	2136.4	2141.9	–5.5
Banks, Retail	4752.2	4756.2	4751.4	4741.8	4745.5	4750.6	4767.7	4764.3	4753.9	4756.1	4762.1	–6.0

For further information on the FTSE Actuaries Share Indices please contact FTSE International on 0171 448 1810. The FTSE Actuaries Share Indices are calculated in accordance with a standard set of ground rules established by FTSE International in conjunction with the Faculty of Actuaries and the Institute of Actuaries. "FT-SE" and "Footsie" are trade marks of the London Stock Exchange and The Financial Times and are used by FTSE International under licence. † Sector P/E ratios greater than 80 and net covers greater than 30 are not shown. ‡ Values are negative. NAME CHANGE: Throgmorton 1000 Smallest Cos Trust now Framlington 1000 Smaller Cos Trust (FTSE SmallCap & 42).

FTSE INTERNATIONAL

TRADING VOLUME

■ Major Stocks Yesterday

Highs & Lows shown on a 52 week basis

WORLD STOCK MARKETS

EUROPE

AUSTRIA (Nov 5 / Sch)

BELGIUM/LUXEMBOURG (Nov 5 / Frs.)

CZECH REP (Nov 5 / Koruna)

DENMARK (Nov 5 / Kr)

FINLAND (Nov 5 / Mka)

FRANCE (Nov 5 / Frs.)

GERMANY (Nov 5 / Dm.)

GREECE (Nov 5 / Drachma)

ITALY (Nov 5 / Lira)

NETHERLANDS (Nov 5 / Fls.)

NORWAY (Nov 5 / Kroner)

POLAND (Nov 5 / Zloty)

PORTUGAL (Nov 5 / Escudo)

SPAIN (Nov 5 / Pts.)

SWEDEN (Nov 5 / Kronor)

SWITZERLAND (Nov 5 / Frs.)

TURKEY (Nov 5 / Tk Lira)

PACIFIC

JAPAN (Nov 5 / Yen)

AUSTRALIA (Nov 5 / AustS)

HONG KONG (Nov 5 / H.K.$)

INDONESIA (Nov 5 / Rupiah)

MALAYSIA (Nov 5 / MYR)

NEW ZEALAND (Nov 5 / NZ $)

SINGAPORE (Nov 5 / S$)

SOUTH KOREA (Nov 5 / Won)

TAIWAN (Nov 5 / TW $)

THAILAND (Nov 5 / Baht)

AFRICA

SOUTH AFRICA (Nov 5 / Rand)

NORTH AMERICA

CANADA

TORONTO (Nov 5 / Can $)

4 pm close

MONTREAL (Nov 5 / Can $)

4 pm close

INDICES

	Nov 5	Nov 4	Nov 1	1996 High		1996 Low	
Hong Kong Hang Seng(31/7/64)	12502.70	12559.40	12502.27	12559.40	4/11	[illegible]	2/1
India BSE Sens.(1979)	3052.84	3092.72	3149.57	4069.35	18/6	2828.00	25/1
Indonesia Jakarta Comp.(10/8/82)	583.87	578.30	570.65	630.21	24/4	512.40	2/1
Ireland ISEQ Overall(4/1/88)	2695.28	2667.89	2660.58	2700.84	4/10	2294.81	2/1
Italy Banca Comm Ital(1972)	614.30	605.35	(c)	674.30	20/5	572.21	27/3
MIB General(2/1/95)	1042.0	1026.0	(c)	1142.00	20/5	979.00	27/3
Japan Nikkei 225(16/5/49)	20592.33		(c) 20633.06	22666.80	26/6	19734.70	13/3
Nikkei 300(1/10/82)	291.26		(c) 292.05	319.70	26/6	284.48	11/3
Taiwan Weighted Pr.**(30/6/66)	6594.14	6622.81	6455.11	6644.05	5/10	4690.22	6/2
Thailand Bangkok SET(30/4/75)	919.01	912.97	912.52	1415.04	6/2	905.34	15/10
Turkey Istanbul Comp.(Jan 1986)	81894.8	81171.2	82589.8	83772.30	23/10	38779.30	2/1
WORLD MS Capital Intl(1/1/70)	706.4*	703.8	701.8	701.78	21/10	725.80	15/1
CROSS-BORDER Eurotrack 100(26/10/90)	1758.58	1747.59	1746.23	1768.45	21/10	1604.40	11/1
Euro Top-100(26/6/90)	1483.75	1478.78	1479.53	1500.85	18/10	1333.01	11/1
HSBC JC Drgn(31/12/88)	(u)	391.31	389.54	392.86	18/10	344.18	2/1
MS Emgr Mkts(7/1/93)	(u)	157.23	156.68	165.91	4/7	147.35	2/1

US INDICES

DJ Ind. Day's high 6068.05 (6082.67) Low 5981.30 (5975.24) (Theoretical†)
Day's high 6049.31 (6057.70) Low 6011.49 (5989.10) (Actual†)

Standard and Poors Composite‡	705.73	703.77	705.27	710.82 (18/10)	598.48 (10/7)	710.82 (18/10/96)	4.40 (1/6/32)
Industrials‡	828.30	825.27	825.03	830.86 (18/10)	702.07 (15/1)	830.86 (18/10/96)	3.52 (30/6/32)
Financial	77.96	77.13	77.92	77.98 (4/11)	58.07 (10/1)	77.98 (4/11/96)	7.18 (4/9/74)
NYSE Comp.	375.07	373.00	374.50	378.22 (18/10)	321.41 (10/1)	378.22 (18/10/96)	4.64 (25/4/42)
Amex Mkt Val	571.76	572.58	569.72	614.89 (22/5)	525.80 (16/7)	614.89 (22/5/96)	29.13 (9/12/74)
NASDAQ Cmp	1220.46	1221.78	1221.31	1258.10 (15/10)	988.57 (15/7)	1258.10 (15/10/96)	54.87 (3/10/74)

■ RATIOS

	Nov 1	Oct 25	Oct 18	Year ago
Dow Jones Ind. Div. Yield	2.15	2.15	2.12	2.41
	Oct 30	Oct 23	Oct 16	Year ago
S & P Ind. Div. yield	1.95	1.92	1.92	2.07
S & P Ind. P/E ratio	22.80	23.15	23.13	17.89

■ NEW YORK ACTIVE STOCKS

Monday	Stocks traded	Close price	Change on day
AT & T	8,170,500	33¾	-⅜
Ericsson	7,542,100	33¼	+4⅛
Micron Tech	4,923,200	28	+2¾
Fed Natl	3,729,000	37⅛	-⅛
Pepsico	3,404,000	29⅝	-⅛
Conrail	3,395,100	80⅛	-1⅛
Comp de Tel	3,031,700	99	—
Coca Cola	2,738,400	50⅝	+⅛
Nike B	2,727,100	64⅝	+⅛
Sprint	2,469,200	41⅞	-2

■ TRADING ACTIVITY

● Volume (million)

	Nov 4	Nov 1	Oct 31
New York SE	394.005	467.479	486.914
Amex	17.382	18.895	19.310
NASDAQ	446.854	540.732	590.579
NYSE			
Issues Traded	3,283	3,263	3,274
Rises	1,337	1,181	1,471
Falls	1,060	1,210	934
Unchanged	876	872	869
New Highs	122	132	171
New Lows	42	32	56

INDEX FUTURES

	Open	Sett Price	Change	High	Low	Est. vol.	Open Int.
■ CAC-40 (200 x Index)							
Nov	2151.0	2193.0	+46.0	2198.0	2147.5	17,890	18,633
Dec	2156.5	2197.5	+46.0	2200.0	2152.5	382	20,523
■ DAX							
Dec	2692.0	2726.5	+39.0	2728.0	2686.0	17,959	—
Mar	2710.0	2745.0	+39.5	2746.5	2709.5	731	—
■ OMX							
Nov	1676.00	1683.50	+14.0	1685.00	1672.50	3,344	27,366
■ SOFFEX							
Nov	3758.0	3797.0	+42.0	3799.0	3758.0	4,775	21,114
Dec	3785.0	3800.2	+48.0	3795.0	3785.0	14	728

	Open	Latest	Change	High	Low	Est. vol.	Open Int.
■ S&P 500							
Dec	711.15	714.00	+2.75	715.20	710.75	57,442	181,406
Mar	719.20	720.40	+2.85	721.40	719.20	354	6,652

	Open	Sett price	Change	High	Low	Est. vol.	Open Int.
■ Nikkei 225							
Dec	20710.0	20620.0	-20.0	20740.0	20510.0	12,674	211,650
Mar	20770.0	20640.0	+90.0	20770.0	20560.0	271	14,818

Open interest figures for previous day.

** Sat Nov 2: Taiwan Weighted Price 6562.94; Korea Comp Ex 766.73. Base values of all indices are 100 except Australia All Ordinary and ... Toronto Comp./Metals & Mining – 500; Austria Traded, BEL20, HEX Gen., MIB Gen., SVL30, SBF250, CAC40, Euro Top-100, ISEQ Overall; ... Minerals and DAX – all 1,000; JSE Gold – 255.7; JSE 20 Industrials – 264.3; NYSE All Common – 50 and Standard and Poor's – 10. §§ Montreal. ◆ Toronto. (c) Closed. (u) Unavailable. † IBIS/DAX after-hours index: Nov 5 – 2716.16 +67.49

† Correction. * Calculated at 15.00 GMT. ● Excluding bonds. ‡ Industrial, plus Utilities, Financial and Transportation. ◆ The DJ Ind. index theoretical day's highs and lows are the averages of the highest and lowest prices reached during the day by each stock; whereas the actual day's highs and lows (supplied by Telekurs) represent the highest and lowest values that the index has reached during the day. (The figures in brackets are previous day's). ♥ Subject to official recalculation.

NOTES – Prices on this page are as quoted on the individual exchanges and are mostly last traded prices. – Calendar year high and low. # Dealings suspended. xd Ex dividend. xc Ex scrip issue. xr Ex rights. xa Ex all. † Priced in US $.

■ TOKYO – MOST ACTIVE STOCKS: Tuesday, November 5, 1996

	Stocks Traded	Closing Prices	Change on day		Stocks Traded	Closing Prices	Change on day
Kawasaki Steel	4.8m	341	-1	Mitsubishi Hvy	2.2m	884	
Nippon Steel Cp	3.7m	332	+1	NEC Corp	2.0m	1270	+10
Yukan Kogyo	3.0m	749	+24	Ishihara Hvy Ind	1.9m	537	+7
Yaskawa Elect	2.9m	449	+9	Miyakoshi Corp	1.8m	1130	+60
Takashima & Co	2.2m	703	+36	Hitachi	1.7m	1030	

4 pm close November 5

NEW YORK STOCK EXCHANGE PRICES

1996 High	Low	Stock	Div.	Yld. %	P/E	Sls 100s	High	Low	Close Quote	Chng Prev. Close
31¼	17¾	AAR x	0.48	1.6	27	298	30⅞	28⅛	30⅞	+2⅛
46⅛	33	AMP x	1.00	2.9	16	5712	34⅛	33⅝	34	+⅛
97½	68	AMR			16	4381	84½	83¾	83⅞	-⅛
50½	37⅞	ASA	1.40	3.6	25	282	39	38¼	38¾	+⅛
53⅛	38⅛	AbbtL	0.96	1.9	21	11251	51⅜	50⅞	51⅛	+⅞
17¼	12¼	Abitibi Pr	0.40	2.9	7	174	13⅞	13¾	13⅞	
20¼	13½	ABM Ind	0.35	2.1	17	225	16⅞	16½	16½	-½
21⅛	13⅞	Acptncein			44	114	u21⅜	20¾	21⅛	+¼
58½	37¼	ACE Ltd	0.56	1.0	14	722	u58½	57½	58½	+1
10¼	9⅛	ACM Gvt In	0.90	8.8	8	393	d10¼	10⅛	10¼	+⅛
7⅞	6⅞	ACM GvOpp	0.57	7.9		2004	7¼	7	7¼	+¼
9¾	8⅞	ACM Man	0.90	9.2		893	d9¾	9½	9¾	+¼
13⅞	6⅛	Acme Elect	0.32	4.3	56	161	7⅜	7⅜	7⅜	+¼
18⅞	13⅞	Acme Mills			13	35	18⅜	18⅛	18¼	+⅛
33¼	27¼	Acordia	0.72	2.5	14	28	28⅞	28⅝	28¾	
22⅞	12	Acuson			105	2936	u22⅞	21¼	22¼	+1
20⅞	17⅞	Adams Exp	0.48	2.4	1	152	20¼	20	20¼	+⅛
21¼	10¼	AdvMic			19	7374	19⅜	18½	19⅛	+⅜
11⅛	8½	Advest Grp	0.16	1.8	6	44	9¼	9⅛	9⅛	-⅛
38⅛	9⅛	Advo Inc	0.10	0.7	108	120	14	13⅝	13⅞	+⅛
53⅞	41⅛	Aegon	1.45	2.8	16	32	52⅝	52¼	52½	+⅝
6¾	3½	Aerflx			3	372	4½	4½	4½	
70⅞	57⅝	Aetna x	0.80	1.2	8	6998	66⅛	65½	65⅝	

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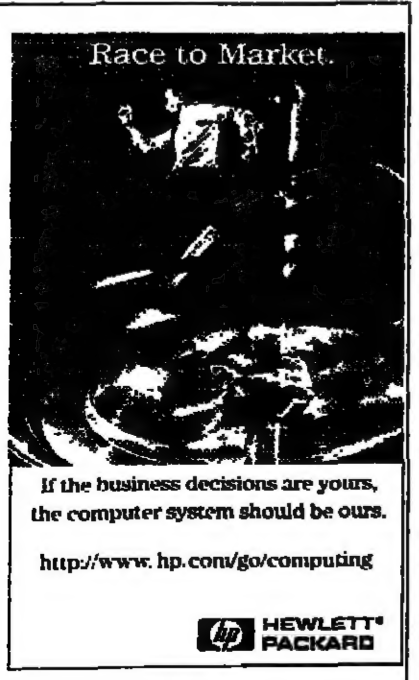

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4 pm close November 5

NYSE PRICES

1996 High	Low	Stock	Div	Yld %	P/E	Sls 100s	High	Low	Close Quote	Ch'ge Prev. Close
Continued from previous page										
20⅜	12	SciAtl♣	0.06	0.4	64	2857	14¼	13⅞	14⅛	+⅛
24⅛	17	Scotman	0.10	0.4	12	211	u24⅛	23⅞	23⅞	
48¼	39⅛	Scripps	0.52	1.1	26	308	u48¼	47⅝	48⅛	+¼
18⅛	12⅝	ScuddrNAsF	0.02	0.2		189	12¾	d12⅝	12⅝	-⅛
14⅛	11	ScuddrNEuF	0.16	1.2		118	13⅞	13¾	13¾	-⅛
20¾	14¾	SeaCtA x	0.77	4.9	21	219	16⅛	15⅞	15⅞	+⅛
16	15	SeaC1.4625	1.46	9.7		3	15⅛	15⅛	15⅛	
71⅞	36⅛	S'gate				3522578	u71⅞	67⅞	71⅞	+4⅛
38⅜	30⅞	Seagrm	0.61	1.6	25	2805	37½	36⅞	37⅞	+⅝
26	17⅛	Sagpul En	1.30	5.6	50	801	21¼	20¾	21¼	+½
40½	26	Sealed Air	0.64	1.6	27	946	u40½	39¾	40⅜	+⅜
53⅞	38¼	SearsR	0.92	1.9	17	18185	47¾	46⅞	47⅜	+⅜
22¾	19¼	ScCpSBI♣	1.24	5.5	15	607	22⅝	22⅜	22½	+⅛
19	11⅞	Seligm Sel	0.84	6.7		136	12½	12¼	12½	+⅛
23¾	13⅝	Sensormat x	0.22	1.2	13	5085	18⅜	16¾	18¼	+1⅜
48½	29½	SequaA	0.60	1.4	48	30	42⅛	41⅞	42	+⅛
53⅝	39	SequaB	0.50	1.0	60	10	52	52	52	
31¾	19½	SanvCp	0.24	0.8	27	2312	29	28⅝	28⅝	-¼
28⅝	19½	SvMstr	0.68	2.7	15	733	25½	25¼	25¼	-⅛
6¼	4⅜	ServMerch			13	1244	5⅝	5½	5⅝	-¼
57½	29½	SGSTom			11	5474	55¾	55	55⅝	+1½
15⅝	10⅝	Shaw Ind	0.30	2.6	30	2784	11⅞	11⅝	11¾	
14¾	10⅛	Shelby Wil x	0.32	2.3	15	76	13¾	13¾	13¾	+½
101½	70⅝	ShellTr	3.26	3.4	20	110	95¾	94⅞	94⅞	-⅜
53⅜	39	SherWil♣	0.70	1.3	20	2186	52⅝	51⅞	52⅝	+1
13⅜	7¼	Shoneys			8	2859	7⅞	d7¼	7¼	-⅛
35½	18⅛	Showboat	0.10	0.5	42	302	18½	d18⅛	18¼	-⅛
28½	22¾	Sierra Pac	1.18	4.1	12	459	u28½	27⅞	28½	+⅜
8	3⅜	SignalApp			0	4	3½	3½	3½	+⅛

- X - Y - Z -

1996 High	Low	Stock	Div	Yld %	P/E	Sls 100s	High	Low	Close Quote	Ch'ge Prev. Close
59¼	39⅜	Xerox	1.16	2.5	41	19706	46⅛	45½	45¾	-⅛
47⅞	38⅜	Xtra Corp	0.72	1.8	15	64	41½	41	41⅛	-⅛
25¾	20⅞	Yankee Egy	1.30	5.8	11	13	22⅝	22½	22½	-⅛
53⅜	43⅞	York Int	0.36	0.7	22	824	49½	48⅛	49½	+⅜
3⅞	3	Zapata	0.14	3.9	10	123	3¾	3⅝	3⅝	
25¾	5⅞	ZnthE				5 2833	12¾	12⅛	12½	+¼
28⅞	21⅛	Zenith Nat x	1.00	3.7	36	16	27	26⅞	27	
7⅛	6⅛	Zenix Inc	0.72	10.1		137	7⅛	7	7⅛	+⅛
22⅞	15⅛	Zero	0.12	0.7	15	262	18⅜	18	18	-⅜
28	18½	Zurn Ind	0.40	1.6	20	418	25¾	25⅛	25½	+¼
11⅞	10½	Zweig Fund	1.06	9.9		30	11	10⅞	10⅞	
9	8¼	Zweig Total	0.84	9.9		258	8½	8⅜	8½	+⅛

Price data supplied by Telekurs

Yearly highs and lows for NYSE reflect the period from Jan 1 1996. Unless otherwise noted, rates of dividend are annual disbursements based on the latest declaration. Sales figures are unofficial.

d-new yearly low. P/E price-earnings ratio. sls-sales. u-new yearly high. x-ex-dividend or ex-rights. yld-yield. z-sales in full.
¶ Dealings suspended.

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NASDAQ NATIONAL MARKET

4 pm close November 5

AMEX PRICES

4 pm close November 5

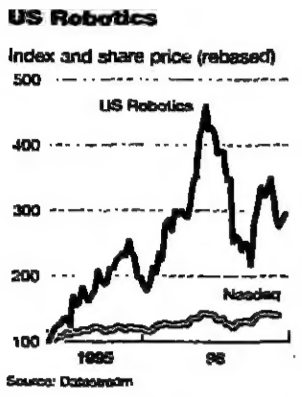
Bonds lift Dow at midsession

AMERICAS

Soaring bond prices and hopes that the political landscape would remain largely unchanged sent US shares higher at midsession, *writes Lisa Bransten in New York.*

At 1 pm, Dow Jones Industrial Average was 43.98 stronger at 6,085.66, the Standard & Poor's 500 rose 7.11 at 713.84 and the American Stock Exchange composite climbed 1.58 at 573.34. Volume on the NYSE was 278m shares.

Bond prices started the day higher as the dollar rose against both the yen and the D-Mark, sending the yield on the benchmark 30-year Treasury to its lowest level since early March.



Falling bond yields led to gains among interest-rate sensitive banks. Chase Manhattan Bank added $2⅝ to $88⅞, Citicorp climbed $2½ to $102, BankAmerica was $2 stronger at $93⅞ and Bank of New York rose $1⅛ at $33¾.

Technology shares also contributed to yesterday's rally as shares in the sector rebounded after dropping since the middle of last month.

By early afternoon, the Nasdaq composite, which is about 40 per cent technology shares, was up 10.26 at 1,230.74 and the Pacific Stock Exchange technology index was 1.8 per cent stronger.

The second most active share on the Nasdaq was US Robotics, which recovered $4⅞ of the $18¼ it had lost since October 15 bringing the shares to $63⅝. Late on Monday, US Robotics reported earnings of 71 cents a share, nearly double what the company made in the comparable period last year and in line with analysts' expectations.

The largest companies on the Nasdaq were also sharply higher.

Intel added $2⅞ at $113⅛, Microsoft was $3 stronger at $141 and Cisco Systems added $2½ at $63⅛.

Meanwhile, fortunes were mixed at volatile Internet companies. Yahoo!, the Internet directory company, lost $1⅛ at $17⅛ and Cybercash, an Internet commerce company, shed $½ at $27¾. Netscape Communications, the Internet software group, rose $1 to $47¾.

Shares in MCI slipped $1⅜, or 5 per cent, to $29⅝ amid worries that British Telecommunications' buyout of the company could face considerable delays. MCI shares had jumped $5⅝ as news of the takeover emerged.

TORONTO pushed further into record territory at midsession with banks, property and utilities all posting strong gains. The early advance on Wall Street helped underpin sentiment and the TSE-300 composite index was up 46.60 at 5,655.86.

There were slack performances during the morning by energy and mining stocks, but for the most part, it was another session of steady buying. Bank shares came in for special attention with Royal Bank of Canada up C$1.05 at C$46.70 and Toronto-Dominion C$1 better at C$34.10.

Elsewhere among blue-chips, Alcan gained 5 cents to C$43.15 and Seagram put on 70 cents to C$49.80. Northern Telecom gained C$1.20 to C$88.40.

Caracas drops 2.9%

CARACAS was sharply lower yesterday morning as investors reacted negatively to the strong gains built up in recent sessions.

The IBC index was trailing by 2.9 per cent at midsession. It stood at 5,743.11, down 169.75.

MEXICO CITY picked up from a dull start on bargain hunting and as hopes grew of a fall in domestic interest rates later in the day.

The benchmark IPC index was 37.84, or 1.2 per cent, higher by midsession at 3,285.55.

Analysts noted that expectations were growing for a a 50 basis point decline in 28 day Cetes, or T bills, later in the day.

BUENOS AIRES made continued steady progress through the morning, helped by the solid early showing on Wall Street.

At midsession the Merval index, which gained 1.5 per cent on Monday, had added 4.61 to 586.87.

S Africa finishes mixed

A mixed session in Johannesburg pushed industrials lower, but left gold shares comfortably on the upside.

The overall index finished off 28.9 at 6,924 and industrials dipped 26.9 to 8,148.4 after a day of mostly futures-driven selling.

However, there was good news for golds in the shape of a steadier bullion price. The golds index gained 7.60 to 1,740.1.

South African Breweries came off 75 cents to R120.75 and Iscor, the steel producer, slipped 5 cents to R329 in heavy volume.

Lyndenburg Exploration provided the brightest news, jumping by R4.40 to R13.10 after the news that Harmony Gold had taken a 45 per cent stake.

Political influences strong as bourses rally

EUROPE

Bonds rallied and equities followed on reports that the Russian president Mr Boris Yeltsin's heart operation had been successful.

Gains accelerated in the afternoon as Wall Street rose on a traders' election bet.

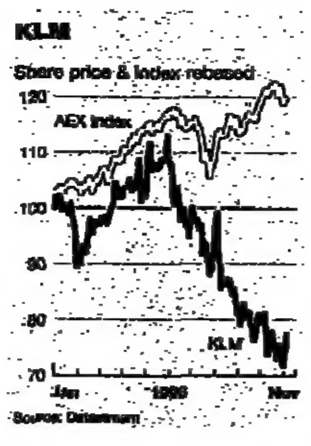
PARIS was buoyed by rallies at Renault and Carrefour and another day of rumour-driven activity at UAP. The CAC-40 ended 45.17, or 2.1 per cent, ahead at 2,187.32.

Good news on sales for October gave both Carrefour and Renault a lift. The supermarkets group ended FFr120 better at FFr2,951, and the carmaker put on FFr4.90 to FFr117.70 after investors learned of a near 25 per cent surge in new car sales in France last month.

UAP gained FFr3.90 to FFr111.90 for a two-day advance of more than 5 per cent. Rumours of a takeover bid for the company refused to go away in spite of a denial from the rival insurance group Axa.

Rhône-Poulenc, one of the strongest CAC 40 performers this year, rose FFr4.20 to FFr154.70 after an upbeat press interview by its chairman, Mr Jean-René Fourtou.

Valeo, the car parts group,



came off sharply on news that a 27 per cent stake in the company, held by Cerus, had changed hands. Dealers said this had softened takeover hopes. The stock ended off FFr8.20 at FFr302.60.

Essilor rose FFr18.50 to FFr411.50 on bid hopes plus a strong sales statement. Saint Gobain, a big stakeholder in the opthalmic specialist, gained FFr19 at FFr703.

MILAN was pushed higher by soaring bond futures and demand for blue chips which had been neglected during the sale of a second tranche of shares in Eni, the energy giant. The Comit index rose 8.95 to 614.30.

Fiat recouped 5.5 per cent after its recent slide, helped by the positive market debut of its New Holland subsidiary and further speculation about a restructuring of the car group's chemical operations. The shares jumped L220 to L4,193 and its chemicals subsidiaries, both suspended limit up on Monday, also remained in the spotlight. Snia added L99 to L1,319 and Sorin Biomedica rose L82 to L5,236.

Shares in Cir, Mr Carlo De Benedetti's holding company, jumped 10 per cent in immediate response to news that it was selling its stake in Valeo. The shares subsequently turned back, but still closed L19.2 higher at L742.

FRANKFURT made a mixed start, but it closed with the Dax index 37.43 higher at 2,716.16.

Turnover rose from DM7.1bn to DM8.5bn. BASF led chemicals higher, putting on DM1.24, or 2.5 per cent, at DM50.50 after it said that Kohap of South Korea would be taking over its ailing worldwide magnetic tape unit. Bayer, which reported a third-quarter rise of 8.3 per cent in pre-tax profits, rose 54 pfg to DM57.94.

Carmakers were influenced by good October US car sales figures. BMW, after a rise by a quarter in US sales on the month, stood out in share price terms, DM28.50, or 3.2 per cent, higher at DM918.50. Porsche, with sales up by a third, saw its preference shares up another DM20 to DM1,045 for a rise of 26.5 per cent over the past three months.

FTSE Actuaries Share Indices

Nov 5							THE EUROPEAN SERIES	
Hourly changes	Open	10.30	11.00	12.00	13.00	14.00	15.00	Close
FTSE Eurotrack 100	1750.19	1750.58	1750.70	1752.26	1753.77	1755.84	1758.83	1758.99
FTSE Eurotrack 200	1809.02	1809.11	1809.23	1810.46	1812.27	1815.06	1816.38	1815.49

	Nov 4	Nov 1	Oct 31	Oct 30	Oct 29
FTSE Eurotrack 100	1747.59	1748.24	1747.44	1754.97	1758.14
FTSE Eurotrack 200	1808.44	1810.81	1806.78	1811.05	1812.44

Base value 1000 (26/10/90): Highday: 100 - 1759.89; 200 - 1817.02 Lowday: 100 - 1749.84 200 - 1808.12 † Partial.

ZURICH, supported by foreign demand, the firmer dollar and Wall Street, saw the SMI index rise 35.6 to 3,784.8.

Analysts said that a SFr34 jump to SFr1,029 in Swissair came as foreign selling pressure eased.

In retailing, Fust and Jelmoli were sharply higher in response to Monday's news that the former Fust owner, Mr Walter Fust, had taken a majority stake in Jelmoli and would offer one Jelmoli bearer for two Fust bearers. Jelmoli rose SFr43 to SFr668 while Fust jumped SFr77 to SFr382.

Alusuisse was SFr22 higher at SFr963 in response to news that the chief financial officer Mr Sergio Marchionne would become chief executive.

AMSTERDAM registered a significant rebound in KLM as the AEX index ended up 4.71 at 586.03. Traders breathed a sigh of relief as news of a planned restructuring of the airline emerged with second-quarter results towards the top end of what had been an alarmingly wide forecast range.

KLM shares, hit lately by news of severe retrenchment in the face of tough trading conditions, surged by almost 5 per cent, closing at Fl 43.80, up Fl 1.90.

Ahold, which on Monday announced to plans to take a half share in a big Brazilan retailer, had another strong session, adding Fl 2.30 to Fl 103.50.

Akzo Nobel was up Fl 1.70 at Fl 217.60 ahead of third-quarter results today. Results expectations also gave Unilever a lift. Up 80 cents at Fl 261.20, the detergents to foods giant puts out a third quarter on Friday.

On the downside, PolyGram retreated Fl 2.20 to Fl 76.40.

MADRID took the line that interest rates would remain favourable in Europe and this, with the day's gains in bonds, lifted utilities and Telefónica as the general index put on 4.35 at 380.69 in turnover of Pta41.46bn.

Banks had a more moderate day, up a percentage point as Ms Susan Leadem of Goldman Sachs, recommending a market weight for the sector, noted their attempts to diversify out of an extremely profitable domestic banking environment with wide, but declining customer margins.

MOSCOW moved cautiously ahead as President Boris Yeltsin underwent heart surgery, although analysts noted that a successful outcome to the operation had already been discounted. The Moscow Times index finished 1.36 higher at 327.92.

Written and edited by William Cochrane, Michael Morgan and Jeffrey Brown

Karachi kerb traders greet Bhutto dismissal

ASIA PACIFIC

The dismissal of Pakistan's prime minister Ms Benazir Bhutto and her government drove share prices sharply higher in kerb trading in **KARACHI**, where the exchange was closed for a religious holiday.

Dealers said up to 500 investors, more than could be found on the floor of the exchange on a normal working day, had flocked to trade in the parking lot outside the exchange.

Analysts commented that the removal of the Bhutto government, under fire for alleged corruption and mishandling the economy, could lift a cloud of uncertainty from the market. If the caretaker administration could initiate a fair accountability process it could help restore investor confidence in the longer term, they said.

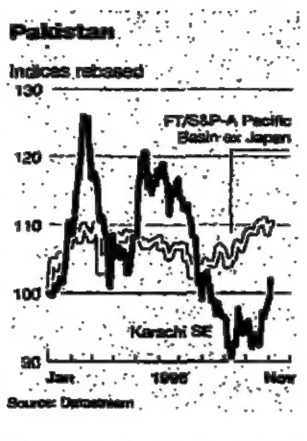
The market jumped 2.8 per cent on Monday on demand for blue chips following a rise in synthetic fibre prices and some favourable corporate results. Based on kerb prices quoted yesterday, one analyst suggested the market could jump by as much as 6-7 per cent in official trade today and tomorrow.

TOKYO returned from its holiday weekend and fell back in thinning volume on investor hesitation ahead of the US elections and Thursday's special parliamentary session to confirm the Japanese prime minister, *writes Gwen Robinson.*

The Nikkei 225 average fell 40.73 to 20,592.33 after moving between 20,494.01 and 20,690.16. The Topix index of all first-section stocks declined 3.77 to 1,553.80 and the capital-weighted Nikkei 300 was off 0.79 at 291.26.

Volume dropped to an estimated 203m shares from Friday's 287m as investors showed marked reluctance to commit themselves either way. Declines led advances by 572 to 458 with 208 unchanged.

In London, the ISE/Nikkei



50 index rose 0.44 to 1,413.98.

Traders noted mild concern among some domestic investors over the US elections, centering on the congressional race and implications for the US budgetary deficit of a possible Democratic sweep of the House and Senate. However, the dominant issue for the market was the domestic political situation and the likely cabinet line-up of the LDP-led minority government.

There were anxieties, too, that the LDP would be unable to govern effectively without a formal coalition. Already the Socialists, in spite of a tacit agreement to back the LDP on key issues in parliament, have threatened to block the forthcoming budget for fiscal 1997 over objections to expenditure on US military forces among other issues.

Electricals and telecommunications issues suffered from foreign selling pressure. Matsushita Electric Industrial fell Y10 to Y1,850 and Sharp lost Y10 to Y1,720. Among telecoms, DDI, down Y48,000 at Y800,000, fell on last Friday's lower than expected earnings for the first-half to September. NTT lost Y10,000 to Y777,000.

Investors also sold issues of non-bank financial institutions following the collapse on Tuesday of the real estate company Sueno Kosan under a mountain of loans from such institutions. Nippon Shinpan, the largest provider of credit card services, fell Y17 to Y688 and JACCS, another leading consumer credit company, slid Y12 to Y891.

Pharmaceuticals drew buying interest on a rise in chemical issues in New York. Shionogi gained Y11 to Y888 in spite of reporting poor first-half earnings. Takeda Chemical Industries gained Y30 to Y2,030 and Fujisawa Pharmaceutical added Y18 to Y1,010.

In Osaka, the OSE average lost 1.71 to 21,264.07 in volume of 21.3m shares.

HONG KONG fell sharply in late trade as profit-taking pulled the market back from Monday's peak. The Hang Seng Index dropped 56.70 to 12,502.70, off an intraday high of 12,616.37. Hongkong Telecom dropped 25 cents to HK$13.35 as first-half results proved in line with expectations.

SINGAPORE saw a flurry of buying in the national steel company NatSteel after a number of brokers upgraded the stock.

NatSteel rose 18 cents to S$2.72 while the Straits Times Industrial index lost 5.55 at 2,070.23.

SEOUL dropped another 1.8 per cent on continuing concerns of an oversupply of stock this month. The composite index finished 13.77 lower at 733.65.

BOMBAY was weak as index stocks took their lead from a Rs18.25 drop in ITC to Rs269 and the BSE-30 index fell 29.88 to 3,062.84.

SHANGHAI's hard currency B shares rose on a technical rebound which took the index 0.255 higher at 47.135 while **SHENZHEN**'s B index fell 0.82 to 89.85 on speculative selling.

DHAKA continued to punch into new high ground in spite of what dealers described as visible signs of profit-taking. At the close, the all-share index was up a further 1.7 per cent, extending its rally over the past four days' trading to more than 20 per cent. It stood at 3,648.74, up 61.06.

BANGKOK closed modestly higher with the SET index up 6.04 at 919.01. Brokers said trading volume remained quiet as the market watched political developments ahead of the general election to be held on November 17.

SYDNEY showed little change in flat volume with investors sidelined by the Melbourne Cup horse race. The All Ordinaries index ended up 4.1 at 2,361.6.

Dealers said that trading came to a virtual halt during the afternoon as the Melbourne Cup got underway. "It's a holiday in Victoria and the rest of the country tends to follow suit," said one broker.

At A$433m, turnover was very light in spite of hopes for an interest rate cut today. News Corp hardened two cents to A$7.23 as analysts speculated on possible synergies from the MCI/British Telecom merger.

Email, the white goods group, added 15 cents to A$3.77 on strong results. BHP came off 14 cents to A$16.84.

FT/S&P ACTUARIES WORLD INDICES

The FT/S&P Actuaries World Indices are owned by FTSE International Limited, Goldman, Sachs & Co. and Standard & Poor's. The Indices are compiled by FTSE International and Standard & Poor's in conjunction with the Faculty of Actuaries and the Institute of Actuaries. NatWest Securities Ltd. was a co-founder of the Indices.

NATIONAL AND REGIONAL MARKETS	MONDAY NOVEMBER 4 1996								FRIDAY NOVEMBER 1 1996					DOLLAR INDEX		
Figures in parentheses show number of lines of stock	US Dollar Index	Day's Change %	Pound Sterling Index	Yen Index	DM Index	Local Currency Index	Local % chg on day	Gross Div. Yield	US Dollar Index	Pound Sterling Index	Yen Index	DM Index	Local Currency Index	52 week High	52 week Low	Year ago (approx)
Australia (78)	212.74	0.6	191.51	153.02	167.36	179.78	0.8	4.25	211.47	191.47	151.64	166.72	178.32	216.14	179.98	183.54
Austria (24)	181.68	0.6	163.50	130.68	142.93	142.84	0.4	1.97	180.69	163.60	129.74	142.45	142.30	195.04	168.36	172.41
Belgium (27)	220.87	0.5	198.83	158.87	173.76	169.78	0.3	3.93	219.71	198.93	157.76	173.22	169.27	221.99	193.77	194.40
Brazil (28)	183.21	-0.3	164.93	131.78	144.13	346.55	-0.3	1.77	183.86	166.47	132.01	144.95	347.78	189.70	123.97	136.82
Canada (110)	183.46	0.4	165.16	131.96	144.33	177.46	0.4	2.02	182.76	165.47	131.22	144.09	176.71	183.46	143.76	144.35
Denmark (30)	320.23	0.4	296.38	236.81	259.00	260.30	0.2	1.77	327.98	296.95	235.48	258.58	259.85	336.30	276.89	281.73
Finland (24)	216.67	0.3	195.05	155.84	170.45	206.48	0.2	2.43	216.01	195.58	155.10	170.30	206.97	229.99	171.73	226.05
France (93)	202.17	0.3	182.00	145.42	159.05	162.32	0.2	2.89	201.56	182.50	144.73	158.91	161.98	202.17	167.70	176.53
Germany (59)	180.67	-0.2	162.64	129.95	142.13	142.13	-0.4	1.74	181.00	163.88	129.96	142.70	142.70	181.65	156.00	159.13
Hong Kong (59)	468.04	0.3	421.34	336.65	368.20	464.64	0.3	3.29	466.60	422.47	335.03	367.87	463.19	470.59	354.67	377.68
Indonesia (27)	208.56	1.9	187.77	150.03	164.09	298.14	2.0	1.69	204.66	185.30	146.95	161.35	292.37	–	–	–
Ireland (16)	317.98	0.3	286.25	228.72	250.15	271.70	-0.2	3.31	316.93	286.95	227.56	249.87	272.36	317.98	246.63	248.63
Italy (58)	75.68	0.3	68.13	54.44	59.54	85.90	0.2	2.42	75.44	68.31	54.17	59.48	85.74	84.53	67.22	71.81
Japan (450)	138.36	-0.2	124.55	99.52	108.64	99.52	0.0	0.77	138.60	125.49	99.52	109.27	99.52	164.68	137.62	140.08
Malaysia (107)	577.42	0.1	519.81	415.33	454.25	561.69	0.0	1.17	576.92	522.35	414.23	454.84	561.70	587.74	425.77	446.03
Mexico (27)	1166.52	0.3	1050.13	839.05	917.69	10106.99	-0.2	1.30	1163.24	1053.21	835.23	917.11	10130.12	1325.65	791.99	901.83
Netherland (19)	307.19	-0.1	276.54	220.96	241.66	237.63	-0.4	3.08	307.36	278.31	220.70	242.34	238.83	314.85	252.71	254.73
New Zealand (15)	91.17	-0.4	82.07	65.58	71.72	68.31	-0.4	4.02	91.51	82.85	65.71	72.15	68.58	94.35	75.94	81.08
Norway (35)	268.25	0.4	241.48	192.95	211.03	231.46	0.0	2.19	267.07	241.81	191.76	210.56	231.44	268.25	222.24	227.27
Philippines (22)	188.58	1.2	169.76	135.64	148.35	246.37	1.2	0.64	186.37	168.74	133.82	146.94	244.13	–	–	–
Singapore (43)	379.78	0.2	341.89	273.17	298.77	246.30	0.1	1.09	379.13	343.27	272.22	298.91	246.08	465.21	361.84	370.31
South Africa (44)	333.52	-0.7	300.25	239.90	262.38	342.66	-0.4	2.24	335.92	304.14	241.19	264.84	344.16	437.76	314.20	362.79
Spain (37)	186.80	0.3	168.21	134.40	147.00	180.45	0.2	3.31	186.28	168.66	133.75	146.87	180.14	190.09	147.48	147.67
Sweden (48)	391.53	-0.2	352.46	281.62	308.01	382.63	0.0	2.24	392.37	355.25	281.72	309.34	382.48	400.14	294.19	311.49
Switzerland (37)	241.85	0.5	217.72	173.95	190.26	190.31	0.3	1.55	240.73	217.96	172.85	189.79	189.76	254.34	219.29	225.37
Thailand (45)	113.73	-0.1	102.38	81.81	89.47	112.52	-0.2	3.05	113.84	103.07	81.74	89.75	112.72	198.96	112.17	155.34
United Kingdom (213)	260.96	0.1	234.92	187.70	205.29	234.92	-0.5	4.02	260.75	236.09	187.22	205.58	236.09	261.17	222.29	223.12
USA (624)	287.51	0.4	258.82	206.80	226.18	287.51	0.4	2.07	286.24	259.17	205.53	225.68	286.24	289.37	240.11	241.78
Americas (795)	263.30	0.4	237.03	189.39	207.14	221.27	0.4	2.06	262.17	237.38	188.25	206.70	220.33	264.65	218.79	220.32
Europe (719)	223.85	0.1	201.52	161.01	176.10	190.84	-0.2	3.01	223.57	202.42	160.52	176.26	191.30	225.29	193.02	194.20
Nordic (137)	334.05	0.0	300.72	240.27	262.79	286.32	0.1	2.19	334.01	302.41	239.82	263.33	286.08	339.67	261.13	281.42
Pacific Basin (876)	154.62	-0.1	139.19	111.21	121.64	112.30	0.1	1.25	154.71	140.07	111.08	121.97	112.20	177.01	150.59	150.87
Euro-Pacific (1595)	183.35	0.0	165.06	131.88	144.24	141.94	-0.1	2.15	183.28	165.95	131.60	144.50	142.01	190.57	168.34	168.83
North America (740)	281.33	0.4	253.26	202.35	221.32	280.29	0.4	2.07	280.10	253.60	201.11	220.83	279.06	282.57	234.19	235.76
Europe Ex. UK (506)	199.27	0.2	179.39	143.33	156.77	164.95	-0.0	2.42	198.96	180.14	142.86	156.86	164.95	201.22	173.04	174.34
Pacific Ex. Japan (396)	297.44	0.3	267.76	213.94	233.99	257.23	0.4	2.88	296.39	268.36	212.81	233.68	256.25	299.79	243.59	252.48
World Ex. US (1810)	185.45	0.0	166.95	133.39	145.89	147.15	0.0	2.14	185.38	167.85	133.11	146.16	147.21	191.55	169.39	169.85
World Ex. UK (2221)	213.27	0.2	191.99	153.40	167.78	182.72	0.2	1.90	212.79	192.66	152.78	167.78	182.28	216.41	188.59	188.92
World Ex. Japan (1954)	259.23	0.3	233.37	186.40	203.94	243.57	0.2	2.44	258.43	233.99	185.56	203.75	243.06	260.37	219.88	220.70
The World Index (2434)	217.36	0.2	195.67	156.34	171.00	187.49	0.2	2.11	216.90	196.38	155.74	171.00	187.17	220.11	181.70	191.91

Latest prices were unavailable for this edition. MARKET CLOSED 4/11/96: Japan

TENDER NOTICE

UK GOVERNMENT ECU TREASURY BILLS

For tender on 12 November 1996

1. The Bank of England announces the issue by Her Majesty's Treasury of ECU 1,000 million nominal of UK Government ECU Treasury Bills, for tender on a bid-yield basis on Tuesday, 12 November 1996. An additional ECU 50 million nominal of Bills will be allotted directly to the Bank of England for the account of the Exchange Equalisation Account.

2. The ECU 1,000 million of Bills to be issued by tender will be dated 14 November 1996 and will be in the following maturities:

ECU 200 million for maturity on 12 December 1996.
ECU 500 million for maturity on 13 February 1997.
ECU 300 million for maturity on 15 May 1997.

3. All tenders must be made on the printed application forms available on request from the Bank of England. Completed application forms must be lodged, by hand, at the Bank of England, Customer Settlement Services, Threadneedle Street, London not later than 10.30 a.m., London time, on Tuesday, 12 November 1996. Payment for Bills allotted will be due on Thursday, 14 November 1996.

4. Each tender at each yield for each maturity must be made on a separate application form for a minimum of ECU 500,000 nominal. Tenders above this minimum must be in multiples of ECU 100,000 nominal.

5. Tenders must be made on a yield basis (calculated on the basis of the actual number of days to maturity and a year of 360 days) rounded to two decimal places. Each application form must state the maturity date of the Bills for which application is made, the yield bid and the amount tendered for.

6. Notification will be despatched on the day of the tender to applicants whose tenders have been accepted in whole or in part. For applicants who have requested credit of Bills in global form to their account with ESO, Euroclear or CEDEL, Bills will be credited in the relevant systems against payment. For applicants who have requested definitive Bills, Bills will be available for collection at Customer Settlement Services, Bank of England after 1.30 p.m. on Thursday, 14 November 1996 provided cleared funds have been credited to the Bank of England's ECU Treasury Bills Account No. 59005516 with Lloyds Bank Plc, Bank Relations, St George's House, PO Box 787, 6-8 Eastcheap, London EC3M 1LL. Definitive Bills will be available in amounts of ECU 10,000, ECU 50,000, ECU 100,000, ECU 500,000, ECU 1,000,000, ECU 5,000,000 and ECU 10,000,000 nominal.

7. Her Majesty's Treasury reserves the right to reject any or part of any tender.

8. The arrangements for the tender are set out in more detail in the Information Memorandum on the UK Government ECU Treasury Bill programme issued by the Bank of England on behalf of Her Majesty's Treasury on 28 March 1989, and in supplements to the Information Memorandum. All tenders will be subject to the provisions of the Information Memorandum (as supplemented) and to the provisions of this notice.

9. The ECU 50 million of Bills to be allotted directly to the Bank of England for the account of the Exchange Equalisation Account will be for maturity on 15 May 1997. These Bills may be made available through sale and repurchase transactions to the market makers listed in the Information Memorandum (as supplemented) in order to facilitate settlement.

10. Copies of the Information Memorandum (and supplements to it) may be obtained at the Bank of England. UK Government ECU Treasury Bills are issued under the Treasury Bills Act 1877, the National Loans Act 1968 and the Treasury Bills Regulations 1968 as amended.

Bank of England
5 November 1996